DOCUMENT RESUME

ED 393 279 EC 304 726

AUTHOR Starko, Alane J.
TITLE Education of the Gifted and Talented: An Introductory Module.
INSTITUTION Eastern Michigan Univ., Ypsilanti. Dept. of Teacher Education.
SPONS AGENCY Michigan Univ. Network for Education of the Gifted and Talented.
PUB DATE 92
NOTE 113p.
PUB TYPE Guides - Classroom Use - Teaching Guides (For Teacher) (052) -- Tests/Evaluation Instruments (160)

EDRS PRICE MF01/PC05 Plus Postage.
DESCRIPTORS Ability Identification; Academically Gifted; Check Lists; *Curriculum Development; Definitions; *Delivery Systems; Educational Methods; *Educational Practices; Educational Principles; Elementary Secondary Education; Emotional Development; *Gifted; Higher Education; Student Characteristics; Student Needs; *Talent; Talent Identification; Teacher Education
IDENTIFIERS *Differentiated Curriculum (Gifted)

ABSTRACT

This training module is designed to provide an introduction to education of the gifted and talented, including information on characteristics associated with gifted/talented individuals and suggestions for modifying curriculum to meet the needs of above-average students. Part 1 of the module covers the following topics: definitions and models of giftedness; characteristics and needs associated with giftedness; organization of gifted programs; and identification issues. Part 2 of the module covers diagnostic placement of students within the regular curriculum and choice of differentiated activities; types of differentiation; and affective needs associated with giftedness. Also provided are answers to commonly asked questions about gifted education. Appendices include vignettes describing students with different types of giftedness, 15 suggested small group activities, ability identification checklists, a summary of the statewide (Michigan) 1989-90 evaluation of the gifted and talented program, suggested resources, and transparency masters which are keyed to the text. (Contains 56 references.) (DB)

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EDUCATION OF THE GIFTED AND TALENTED:

An Introductory Module

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INTRODUCTION

This module is designed to provide a brief introduction to education of the gifted and talented, including information on definitions of gifted, characteristics associated with gifted/talented individuals, and suggestions for modifying curriculum to meet the needs of above-average students. It may be used in at least two ways. In large groups, participants are asked to read descriptions of six gifted students as a pre-module assignment. Then, the module may be used as the basis for two lecture/discussion sessions. Transparencies for the sessions are provided and keyed to the text as T-1, T-2, and so forth. In smaller groups, it may be desirable to use the module itself as a pre-reading assignment. In that case, class time may be spent in small group activities described in Appendix A. Throughout the module, "stage directions" and other comments to the instructor are presented in brackets.

At the end of this module, participants should be able to:

- Explain at least three definitions of gifted and describe behaviors of individuals considered gifted using each definition.

- List at least five characteristics commonly associated with giftedness and describe how they may be manifested in varied ways, including behaviors that may be considered positive and negative in a classroom.

- Describe how at least one characteristic may be manifested differently as affected by a disability or cultural difference.

- Distinguish among organizational models for gifted programs: Self-contained classes, single-subject classes, pull-out programs, individual acceleration, cluster groups.

- Describe the use of preassessment for placement in the regular curriculum.

- Describe four general types of curriculum modification: acceleration, increasing depth/breadth, interdisciplinary teaching, independent study and product development.

- Given a familiar unit topic, describe at least one activity representing each type of enrichment.

- Describe at least two aspects of social/emotional development of particular importance to gifted students, with implications for classroom practice.

PART I

PRE-MODULE ASSIGNMENT

Read the descriptions of students found in Appendix A. Consider how the six students are the same and how they are different.

[You may wish to begin class with a brief discussion of the reading, perhaps by having students share in pairs the similarities and differences they noticed. Focus students' attention on the fact that, despite the differences noted, each of the prototypes described may be considered gifted. Continue the lecture/discussion using as much of the following information as appropriate. It is particularly vital that students understand that giftedness is a complex construct that can be manifested in a variety of ways. These manifestations may or may not correspond to the stereotype of a "good student," depending on the type of giftedness and the personality and experiences of the individual.]

T 1 What is Giftedness? What does it mean when an individual is classified as gifted? Throughout history there have been many definitions, as each society identified persons of exceptional ability in areas valued by that culture. Ancient Greeks prized skillful orators; Romans valued great engineers or soldiers; other societies have recognized and valued exceptional painters, storytellers, weavers, sailors, mathematicians, and a host of countless other abilities. In our society, "giftedness" has been traditionally associated with unusual intellectual ability, the type of ability that allows students to do well in school.

T 2 There is no overall consensus on the definition of giftedness, nor on the distinction between "gifts" and "talents." Some writers use the words interchangeably. Others use "gifted" to refer to general intellectual ability and "talented" to refer to a specific area of strength, for instance, mathematics. Still others use "gifted" to specify intellectual strengths while "talent" is used to refer to abilities in the visual or performing arts. This module will use the word gifted in its most general sense, including diverse areas of strength.

T 3 IQ as Giftedness. One root of the association between giftedness and general intellectual ability is an early twentieth century definition of giftedness proposed by Louis Terman, in which giftedness was defined as exceptional performance on the Stanford-Binet Intelligence Scale. Derived from a test designed to predict school success, Stanford-Binet identified students whose intellectual development was more advanced than their age mates. Today, some schools, individuals, and organizations continue to use a definition of giftedness based solely on IQ. A specific cutoff score (for example, 130) or a particular percentage (for example, the top five percent) based on an IQ test are designated as gifted. While such definitions are simple to manage, they are criticized for their lack of recognition of the complexities of human intelligence and their limited ability to predict achievement outside of school.

T 4 Sternberg's View. Contemporary theorists do not portray intelligence as a singular quantity that can be easily represented by one score. Sternberg (1985), for example, has developed a triarchic theory of intelligence. He believes that intelligence includes three basic components: the componential system or "workings" of the mind in processing information; the response to novelty; the ability of the individual to interact with the environment, and ability that might be called social intelligence or "street smarts." Individuals with strengths in these areas might be gifted in many different ways. A person whose componential system is particularly strong might be outstanding at taking in and analyzing information, while a person who deals well with novelty might come up with original ideas or be an excellent problem- solver. You probably know someone with particular ability in interacting with the environment, someone who always seems to know the right person to call, or is always in the right place at the right time--someone with exceptional social intelligence.

T 5 Gardner's Multiple Intelligences. Gardner (1983) believes tha we all have multiple intelligences. He has identified seven independent intelligences: linguistic, musical, logical-mathematical, spatial, bodily kinesthetic, interpersonal, and intrapersonal. According to his theory, a person may be gifted in any one of the seven intelligences without being exceptional in the others. For example, a fine dancer might be considered gifted in bodily kinesthetic intelligence, but would not necessarily be gifted in music or math. An exceptional counselor (or friend) might be

gifted in interpersonal and intrapersonal intelligences. As other theorists investigate the nature of intelligence, definitions of giftedness will continue to evolve.

T6 Renzulli's Three-Ring Conception. Two other well known definitions should be noted. Renzulli (1978) proposed a definition of giftedness based on the concept of creative productivity. He made a distinction between individuals who were adept at taking in and processing information, good "consumers" of information, and those who produced new, original contributions to knowledge or art, "creative producers." His three-ring conception of giftedness portrays factors that he believes to be essential for high quality creative productivity: above -average ability, creativity, and task commitment, or the ability to stick to a task of interest. Adult creative producers are of above-average ability, but not necessarily from the top one percent, or five percent, of the population in IQ. They work creatively and with great commitment to the tasks they select. Renzulli calls this interaction "gifted behavior." Schools that use this definition usually identify above-average ability students and provide them with experiences designed to help them develop creativity and task commitment.

T7 Michigan and the Federal Definition. The definition of giftedness that has been adopted by the State of Michigan was proposed by the federal government. As defined in 1978 by the United States Office of Education, and adopted in 1979 by the State Advisory Council for the Gifted and Talented, the definition states:

> Gifted and talented children means children, and whenever applicable, youth, who are identified at the preschool, elementary or secondary level as possessing demonstrated or potential abilities that give evidence of high performance capability in areas such as intellectual, creative, specific academic, or leadership ability, or in the performing and visual arts, and who, by reason thereof, require services or activities not ordinarily provided by the school.

T 8 Varied Profiles of Strength. This definition provides for a variety of types of giftedness. The six profiles provided before this lesson describe prototypes of students displaying gifts in the areas of intellectual development, creativity, a specific academic area, leadership, and the visual and performing arts. Virtually no student is gifted in all these areas. It is unreasonable to expect gifted students to be good at everything, to always know the answer, or to always hand in work on time. (We would not expect Charles Dickens to be a gifted mathematician or singer, or Barbara McClintock to write great poetry or have perfect handwriting. Nor would we expect even the most gifted star of the NBA to hit every shot accurately, be perfectly behaved, or win every game. We should not expect those with academic gifts to be any different.)

T 9 Varied Manifestations of Strengths. It is also important to note that these, or any other types of gifts, may be manifested in ways that may or may not be viewed as positive in a traditional classroom. For example, a student who is gifted in leadership may be the student government president, an organizer of protests regarding cafeteria food, or a gang leader. While an early, well-developed sense of humor is often associated with intellectual gifts, it may be used to write clever, insightful stories or to make jokes at the teacher's expense.

T 1 0 Examine the list of characteristics on T-10. Have the students briefly discuss how some of the characteristics may be manifested in both positive and negative behaviors. Manifestations of giftedness may also be affected by disabilities, language differences, or cultural norms. For example, an extremely bright hearing-impaired student may not develop as extensive an early vocabulary as his hearing peers. A gifted learning-disabled student may have difficulty reading. A child from a culture for whom silence in the presence of authority is a sign of respect may not display the constant questioning that is characteristic of many bright children. Each child's strengths must be evaluated in the context of culture and other personal characteristics. *[Ask the class to look again at the list on T-10. Try to identify other characteristics that might be affected by disabilities or cultural differences.]*

T11 Michigan's Position. Michigan's definition also notes that gifted students, because of their abilities, require services or activities other than those traditionally provided in schools. That, perhaps, is the most important consideration for teachers. It may not matter on a day-to-day basis whose definition of giftedness has been adopted by the school district or whether a particular student has been officially identified as gifted. Any time a student's abilities are significantly mismatched with the regular curriculum, adaptations need to be made. In the case of students who may be identified as gifted, this means they may have already mastered portions of the regular curriculum, be capable of mastering it at a much more rapid pace than other students, and/or need activities designed to foster and develop their particular abilities.

T12 The Michigan State Board of Education ***Position Paper on Gifted and Talented Education in Michigan Schools*** lists four major issues that must be addressed:

- Gifted and talented students must be able to move at their own rate regardless of age or grade placement.

- Gifted and talented students must be offered a diversity of learning experiences which includes instructional methodologies, activities, materials and experiences beyond the classroom.

- Gifted and talented students need to be challenged and stimulated in an environment that allows children of like ability and interests to learn from and support one another.
  Gifted and talented students require guidance so that they may understand themselves and make the best of their educational opportunities.

T13 Organization of Gifted Programs. The experiences necessary to provide for these needs may be organized in many different ways depending on district needs. Some districts provide self-contained, full day classes or schools for the gifted. These would include self-contained classes (i.e., gifted third grade), as well as magnet elementary schools or specialized schools, for example, a school providing advanced training in technology or in the visual or performing arts.

Some districts provide advanced classes in single subjects or interdisciplinary areas, for example, advanced mathematics or humanities. These are often characterized by a rapid pace and/or enriched additional content.

Some districts with heterogeneous classes provide supplemental enrichment through "pull-out" or "send-out" groups, in which small groups of students meet outside the regular classroom for experiences designed to broaden or accelerate students' experiences and allow for interaction with other gifted students. These are usually taught by specialized teachers. In most cases, these classes provide instruction in areas outside the regular curriculum and/or facilitate self-directed learning, for example, fifth graders studying the stock market or learning to organize individual projects. In other cases this type of grouping is used for experiences that are tied to the regular curriculum, for example, a group that is "pulled out" for advanced math.

Some districts accelerate individuals or groups of students, providing the regular curriculum earlier or more rapidly than usual. These options include early entrance to kindergarten, grade acceleration (going to third grade at age seven), subject acceleration (eighth grade algebra), or early graduation. Acceleration is frequently used in conjunction with one or more other options.

At the elementary level, one commonly used organizational pattern is the use of cluster groups, or flexible instructional groups that include three to seven identified gifted students in a heterogeneous class. These clusters provide some opportunities for gifted students to work with other students of like abilities, yet still participate in heterogeneous groups. The classroom teacher organizes instruction for the group based on the needs of individual students. The intent of clusters is to provide the "critical mass" of students needed for a viable instructional group.

T14 Identification. Students are identified for gifted programs in a variety of ways. Most districts use "multiple criteria," that is, some combination of ability or achievement test scores, student performance, and recommendations from teachers, parents, or others. It is important that identification systems be broad and include data from diverse sources. Identification that is based solely on test scores is subject to cultural or gender bias and can lead to the under-representation of various

groups. It is also vital that identification systems be framed in the cultural contexts of the student populations. For example, verbal fluency might be an appropriate cue for identification in some areas, but would be inappropriate for students whose cultures teach that listening without speaking is a sign of respect. Bright students with disabilities must be identified in those contexts.

T15 Teacher as Talent Scout. Classroom teachers often play an important role in identifying students for district programs. While most districts use some type of test score in their identification process, the next most common type of identification is teacher nomination. Teachers play an essential role as "talent scouts," particularly in identifying students who do not test well or whose gifts may be manifested in nontraditional ways. It is important for beginning teachers to understand the district's nomination process and ask for assistance if needed, to help locate students whose gifts may not be obvious from traditional test scores. This is particularly important in areas of ethnic diversity where cultural or language differences may depress test scores. It is also important to make sure that the classroom activities and atmosphere make it possible for the behaviors being sought to emerge. If students are never placed in situations that allow them to question, express interest, or engage in creative activities, it is unlikely their teachers will be able to identify those behaviors. *[You may want to have students examine and compare some of the identification check lists in Appendix C.]*

T16 Making a Match. Regardless of the type of program provided by the district, teachers are responsible for nurturing the gifts and talents of students in their classrooms and providing a good match between their students' needs and abilities and the curriculum presented. This responsibility is particularly crucial in districts which provide part-time supplemental enrichment or no special program at all. Students who go to enrichment for two hours per week have needs all day long, every day. No one is gifted only on Tuesday at 2:00 p.m.! Strategies for dealing with the needs of gifted and talented students in the regular classroom will be discussed in Part 2.

PART 2

T17 Where Will They Be in Ten Years? Whatever special services are (or are not) provided by the district, it is important for each teacher to consider the strengths and needs of individual students within his/her classroom. Many students' needs do not match the curriculum as usually presented. For example, Adam entered school reading at approximately the sixth grade level. Before he went to kindergarten, he read road signs, picture books, and parts of the newspaper to his parents at the breakfast table! In his kindergarten classroom he was presented with worksheets that asked him to circle the things that started with F, color the apples red, and count to ten. Needless to say, such activities presented little challenge and were not a good match with his skills. At home while in second grade, Lisa enjoyed calculating multi-step math problems using square roots, cubes, and common constants (for example, the speed of sound) while playing with LEGO's. The addition facts to 20, with which she was presented in school, were of little value to her. Although her district provided one-half day of special programming per week, the remaining four one-half days offered little challenge

How these students will appear five or ten years later will vary enormously as a result of their experiences inside and outside school. Adam could be editor of the high school literary magazine, serving an internship with a local newspaper, or conducting original historical research. He could also have succumbed to boredom and achieved at the minimal standards required of him. At age seventeen, he may not "look gifted" any more. Lisa may be taking college math courses while still in high school, or "cruising" through high school with a C+ average while building a computer at home in the basement. While no teacher can control all the factors that will affect these students' choices, the types of experiences they have in school can have a major effect on their attitudes, opportunities, and decisions. They will need educational opportunities that challenge them, build on their interests and strengths, and allow them to interact with others of like abilities.

T18 Two Basic Decisions. There are two basic areas with which teachers need to be concerned. First, they need to determine the student's diagnostic placement with regard to the regular curriculum. That is, how much of the regular curriculum does the child already know? Which parts

of the regular curriculum does she/he need to learn? The notation on Adam's permanent record going to first grade said: "Reads some." (This is reminiscent of Fred Astaire's first screen test review, which reportedly read, "Dances a little"!) Second, teachers need to make decisions about how the regular curriculum should be modified to best adapt to students' needs. This modification is sometimes called curriculum differentiation.

T19 Placement in the Regular Curriculum. Diagnosis and placement of gifted students within the regular curriculum is often referred to as curriculum compacting (Renzulli and Smith, 1979; Starko, 1986). In its identification of strengths and needs, and planning of individual goals, compacting parallels the IEP process used in other areas of special education. (In fact, some states require IEP's for identified gifted students.) In its simplest form, compacting entails diagnosing which skills within a particular body of content (a unit, chapter, or grade level of a subject) a student has already mastered. For example, before beginning a math chapter on multiplication, a pre-test could be used to determine which students had already mastered the skills to be covered. As J.M. Greenwood wrote in 1988, "When once a child has learned that four and two are six, a thousand repetitions will give him no new information and it is a waste of time to keep him employed in that manner" (page 13). In compacting, material that has already been mastered is omitted and replaced with alternate activities.

T20 Some teachers devise their own tests for pre-assessment; others use unit tests or excerpts from other commercial materials. Pre-assessment (and compacting) may be done with a whole class, a small group, or an individual. In cases of students with extremely advanced skills, a series of pre-assessments may be necessary. For example, Adam's first grade teacher had to give a series of unit tests before identifying any skills in which he needed instruction.

T21 In other cases, particularly when the instruction deals with concepts rather than skills, students may not have already mastered the content but may be able to do so much more rapidly than other students. These students may be allowed to progress through the content at their own pace, perhaps through the use of contracts, management sheets, or other forms of independent study (Parke, 1989).

T22 Planning Alternate Activities. If students' curriculum has been compacted, they will complete the regular assignments in less time than average students. It is then necessary to decide how to use the additional time. One basic decision is between acceleration and enrichment. As mentioned in Part 1, acceleration is the pursuit of the regular curriculum at an earlier time or faster pace than usual. If, for example, a student had compacted out of most of the fourth grade spelling book, she might be accelerated into the fifth grade book. Since acceleration affects a student's curriculum for years after it occurs, it is important to learn the district's policies regarding its use. In many cases, teachers will have more flexibility to pursue enrichment, that is, modification of the regular curriculum and/or incorporation of content and activities outside the regular curriculum.

T23 The regular curriculum may be modified in various ways and, in fact, there are numerous curriculum models designed to differentiate curriculum for gifted learners. These modifications may be divided into acceleration and three types of enrichment: increased depth/breadth of content or skills, thematic or interdisciplinary study, and independent investigations and product development.

T24 Whatever type of modification is selected, one fundamental principle remains the same: <u>Enrichment and/or acceleration options chosen should reflect a student's strengths and interests</u>.

T25 Does this mean gifted children have no weaknesses or that their weaknesses should be ignored? Of course not. **All** students should receive diagnosis and instruction of needed content in the regular curriculum. However, gifted students also need to be provided with additional challenge in areas in which they are already very capable. For these students, "at grade level" or "minimum competence" is not sufficient. Mozart would never have accomplished the things he did without time to practice the piano--or if he had only practiced as much as the average musician his age. Mme. Curie needed time and effort to hone her skills in the lab. It is a mistake to think that students who are "truly" gifted will not have to work hard. Studies of talent development indicate that highly accomplished adults in a variety of fields had to work very hard over many years **at tasks in which they were already proficient** (see, for example, Bloom, 1985). They do not "make it on

their own" or with minimal effort. Gifted children (and probably all children) also need additional attention and challenge in areas of particular strength.

T26 It is equally important that curriculum modifications tie to students' interests. Do we then allow bright students to study only topics of their own choosing? Certainly not, for students will never select topics to which they have never been exposed. It is an important role of schooling to introduce students to new areas, expose them to new ideas, and actively cultivate diverse interests. However, it is important to take students' interests and concerns into account when planning differentiated activities.

For example, one second grade teacher became very irate when her top math students not only did not work on the "Math Challenge" activities she presented when the regular math was completed, but stopped working as rapidly and accurately on their regular math. A close examination of the "Math Challenge" activities revealed them to be a series of multiplication dittos. The same phenomenon was observed by the high school English teacher who rewarded students who finished early with some of her favorite activities--dittos on Greek and Latin root words! If the reward for working harder and faster is more of the same work (or work that you hate), who is going to do that? Not the bright students! Those students very quickly figure out the reward system in the classroom and act accordingly. This is why it is often difficult to spot bright students in upper grades. They have learned that it is safer to hide their abilities rather than be faced with more repetitious assignments. This does **not** mean that bright students should spend all their enrichment time in "fun and games." It does mean the activities selected should be matched to the students' interests. The older the students, the more input they can have into the process of planning supplemental activities. The following are some of the more common strategies for modifying curriculum.

T27 Acceleration allows students to move earlier or more rapidly through the body of regular curriculum. It can be facilitated through flexible grouping within or between classrooms, special classes, correspondence courses, dual enrollment (taking high school and college courses at the same time), or cross-grade groupings. For example, a third grade student may go to the fifth grade to meet with a reading group at

his level, or a high school student in a small rural school might take a college correspondence course in calculus or other subjects not offered in her district.

T28 Increasing the depth and/or breadth of content and skill can include a wide variety of activities. In some cases students may investigate the regular content in more depth. This is often facilitated through the use of models such as Bloom's Taxonomy, in which students move from activities that require them to comprehend and replicate material [*List three taxes imposed by the British government that contributed to the movement for independence]* to activities that require them to evaluate material or use it in original ways [*Were the participants in the Boston Tea Party criminals? Defend your position in an essay, poem or song].* Such activities might be pursued by individuals, small groups, or an entire class. Open ended assignments that allow for a variety of levels of response can often help in meeting the needs of the brightest students without demanding that every activity be individualized.

In other cases, students may be allowed to study subtopics branching out from the regular curriculum (*Women in the Revolution, Music of the 1770's*) or other related topics (*The Russian Revolution, The Computer Revolution*). Some teachers use centers to spark student interests and provide structure for these types of enrichment activities.

T29 *[If time permits, you may wish to have students brainstorm enrichment activities for a fourth grade unit on plants.]*

T30 Thematic or interdisciplinary study allows students to explore broad themes that cross disciplines. This is <u>not</u> the same as using a variety of disciplines to study one topic (coloring dinosaur pictures, measuring dinosaurs, singing dinosaur songs, etc.). In thematic teaching, content is organized around a theme that is important in more than one discipline. For example, the theme "patterns" could be studied in relation to mathematics, music, or botanical structures. The theme "exploration" could investigate the efforts of Columbus and Magellan, but also explorers in science (Barbara McClintock) or art (Picasso). Thematic instruction can be used for a whole class or for small groups, for example, as language arts instruction for a cluster group.

T31 *[You might briefly discuss how the plant unit might be broadened into an interdisciplinary study of growth and change.]*

T32 Independent investigations and product development focus on developing the skills of independent learning, typically centering around areas of student interest. Students are taught skills in research, time management , and organization and are allowed to use them to pursue topics of interest. Frequently, efforts are made to help students use the tools, skills, and techniques of experts in a particular field. For example, a student interested in history might be provided with instruction (or a basic reference book) on techniques of historical research and encouraged to pursue an original research project (for example, interviewing past mayors of the town, or investigating changes on Main Street since WWII), rather than reading about history in an encyclopedia.

In addition, this type of enrichment often includes the development of sophisticated products that may be presented to a variety of audiences. For example, an elementary student who has investigated the historic buildings in town may not write a report, but may create a pamphlet to be distributed by the local Chamber of Commerce. A high school student who is adept at computer programming may adapt communication devices for a multi-handicapped student.

T33 *[How might students become involved in independent research on plants? How might they go beyond library research to collect data like real botonists?]*

T34 Mentors. Individual investigations or any of the other curriculum modifications may be facilitated through the use of mentors or other types of volunteers. These may range from an individual engineer willing to assist a student in building a solar greenhouse, to a parent volunteer who holds weekly discussions on great works of literature. In some districts, these roles are coordinated by a building or district level specialist. If not, teachers should not feel hesitant to ask for assistance from parents, colleagues or other community members. No one individual can possibly have expertise in all the areas bright children want to investigate. The important skill is to be able to find someone who does!

T35 Affective Needs. In addition to students' cognitive needs, it is important to consider the affective needs of students whose intellectual abilities far surpass those of their age-mates. **Contrary to popular stereotypes, gifted children are not generally social misfits.** Like those of average intelligence, bright children have a wide range of personality types and most get along well with their peers. They do, however, face a number of special challenges.

T36 Varied Levels of Development. Many bright children are at very different levels in their physical, emotional and intellectual development. A student with advanced intellectual abilities may well have average or even below-average physical skills and emotional maturity. Such discrepancies can provide enormous frustration, especially for young children. Imagine the feelings of rejection of the four-year-old whose friends don't respond to his notes or don't want to discuss the news, or the aggravation of the seven-year-old who has been accelerated into a sixth grade reading book but does not have the fine muscle control to write between the narrow lines in the workbook. Such difficulties may be compounded by adults who expect students to respond with a maturity level matching their intellect rather than (more appropriately) one matching their age. Such a teacher may be astonished to see a five-year-old who is reading *Little House on the Prairie* throw a truck at a peer who is teasing, even though such behavior may not be unusual (if undesirable) for a five-year-old.

T37 Varied Peers. Bright children need many different kinds of peers. A child who has the body and emotions of an eight-year-old with the mind of a 12-year-old needs varied peers to meet her physical, social, and intellectual needs. If she runs track, it should be against other eight-year olds. She may also enjoy camping with the Brownie Scouts or playing video games with children her age. However, she needs intellectual peers (who may or may not be age peers) to meet other needs. Most eight-year-olds will not be able to discuss literature with her on an appropriately challenging level or work on group problem-solving in appropriate mathematics. They may not be interested in in-depth discussions of social or political problems. These roles must be filled by either equally bright eight-year-olds or by older students. A high school student with acting talent that is so exceptional it far surpasses any of his classmates needs to work with actors other than those in the high school play, in

order to grow and feel satisfaction with his performances. Some of these needs can be met by having friends (and colleagues) of different ages. However, the more exceptional students' ability, the more vital it is that they have the opportunity to spend time with others of like ability, whose intellectual **and** emotional needs provide a closer match with their own.

T38 Sensitivity and Fitting In. Many bright children are very sensitive to verbal and nonverbal cues. If they are constantly surrounded by individuals who make them feel "different," it can be very uncomfortable. A very common response of secondary students participating in advanced summer programs is: "Finally, I can be myself. Here, I am not weird. Here, I am not the only one who cares about chemistry (or math, or music). Here, I am OK." Schools have an important responsibility to provide opportunities for students to develop a variety of peer relationships. Students should not be forced to spend large amounts of time working alone because no one of like ability happens to be scheduled into their classroom. Flexible scheduling and consultation with other teachers can provide enormous benefits by allowing interaction with others with similar interests, needs, and abilities.

T39 Perfectionism. Finally, teachers should be aware that some bright children may have difficulties with perfectionism. Such students may be dissatisfied by any paper less than 100 percent and unwilling to accept any challenge for fear they might make an error. Schools are often unwitting partners in the creation of such disabling perfectionism. If students are presented daily with inappropriately easy work which they complete perfectly without effort, and this pattern continues for years, it should not be surprising that they come to expect the pattern to continue. In essence, such students have been taught they are supposed to be perfect, through the lack of challenge they have faced and the praise received for their "perfection." It is important that students be weaned from this dependence. In many cases, small challenges gradually increased, modeling of struggling and error, and reinforcement for unsuccessful efforts may be helpful. In extreme cases, individual or family counseling may be needed to prevent long term underachievement.

T40 Meeting the cognitive and affective needs of bright children entails challenges, not just to the students, but to their teachers as well. Such children may not alway accept answers without question or fit into a comfortable routine. They may need activities that demand thought,

flexibility, and patience. Like all children, they have unique needs, and it is important that the school provide a curriculum that meets those needs. For bright children as for all children, school must be a place of challenge and learning, a place in which it is safe to question, grow, and be themselves.

COMMON QUESTIONS ABOUT EDUCATION OF THE GIFTED

1. Don't these students really make it on their own? Do we really need to worry about them?

It is a mistake to assume that bright students, when left to their own devices, will achieve at an ability level commensurate with their abilities. We know that talents in a variety of areas need consistent work, support, and training to fully develop (Bloom, 1985). In fact, Terman once remarked that if we compare mental age and achievement, the gifted might be considered the most retarded group in school, that is, the group achieving furthest from its potential.

It is easy to be lulled into a false sense of security because most teachers can name students who were highly successful without any special attention. However, we cannot name the students whose gifts have been so ignored, frustrated, or undervalued that they no longer display them in school. It is important that we not neglect the needs of a particular group of students simply because **some** of them are able to be successful despite what the schools do for them--rather than because of it.

2. Aren't truly gifted students good in all academic areas, kind of like Alex Keaton on *Family Ties*?

Alex Keaton is a myth. Unfortunately, many teachers keep looking for him. Real life gifted students have many profiles of abilities and many personality types. One student may be a brilliant mathematician and an outstanding cellist, while exhibiting average or slightly above average performance in literature. Others may have very different combinations of abilities. Some bright students are consistently organized, systematic and prepared. Others lose their homework, forget their lunch money, and have lockers that look like toxic waste dumps. While improving those organizational habits can be important, they should not preclude needed academic challenge. It is unreasonable to expect perfect understanding,

knowledge, or behavior from identified gifted students. Teacher comments such as: "Tommy, you should know this. You're gifted" reflect both the teacher's lack of understanding of the nature of giftedness and a cruel insensitivity to the student's feelings.

3. What about "early ripe, early rot"? Won't these children just burn out faster?

While parents and teachers need to be sensitive to the amount of pressure placed on all children, there is no evidence to suggest that early, appropriate levels of challenge are in any way damaging. The "leveling off" sometimes seen in older students is often the result of lack of suitable challenge rather than the opposite. Students for whom excellent work creates more of the same, or who have never been presented with anything but average work, may well start achieving at an average level. That is what school has taught them to do.

4. But what about acceleration? Don't those children have trouble later on?

There is no one strategy that is best for all bright students. Certainly, when students are being considered for acceleration, especially of more than one subject, social maturity and interactions, as well as academic needs, should be taken into account (see, for example, Feldhusen, Procter & Black, 1986 for guidelines on grade acceleration). However, despite the worries of many parents and teachers, the research base for acceleration is strong. Meta-analyses of studies on a variety of types of acceleration indicated positive academic effects and neutral affective effects (Rogers, 1991).

It is interesting to consider that schools regularly decelerate the learning of young children with little apparent concern. That is, they take young children whose natural rate of learning and growth is very rapid (who enter kindergarten reading, calculating, and discussing the news, for example), and force them into a system that allocates a certain amount of growth each year--one level in reading, one math book, etc. Perhaps the procedures typically described as acceleration are not acceleration at all, but merely allowing some students to resume their natural rate of progress.

5. Hasn't research shown that ability grouping is bad for students?

The controversy over ability grouping has posed difficulties for some teachers attempting to provide for the needs of gifted students. This is unfortunate, because some of the research that is being used to make these decisions is being used in inappropriate ways. For example, Slavin's (1987) meta-analysis on grouping, which is often used as evidence that grouping is harmful, eliminated all grouping for gifted programs from the analysis. None of the data represented grouping for gifted students, so it is not a reasonable basis for making decisions about such groupings.

In addition, the study itself indicated that many types of grouping (within and between class grouping, cross grade grouping, for example) which are commonly used to provide for the needs of bright students had very positive effects. The only type of grouping that did not show positive effects was whole class, inflexible (top, middle, and bottom third grades, for example). A second meta-analysis by Kulik and Kulik (1991) indicated significantly positive effects for grouping for identified gifted students.

While it is certainly possible to compare research studies and examine conflicting results almost indefinitely, it is safe to say there is <u>not</u> a research base indicating that special programs for gifted students are in any way harmful to them or to students in the regular program. While few educators today would support placing students in long-term inflexible groups with no recognition of strengths and weaknesses, and no opportunity for change (tracking), that is a far cry from eliminating all grouping or eliminating programs designed to match students with specific instructional needs.

6. Won't cooperative learning solve these problems?

Cooperative learning is a powerful educational strategy that can be useful for many students in a variety of situations. However, to assume that it is the best strategy for all students, including the gifted, or that it can somehow replace special programming for gifted students, is not supported by research. The research base on gifted students in cooperative learning is extremely limited. In a 1990 review, Robinson found that of 476 citations on cooperative learning, only five discussed

giftedness, and only one of those examined outcome data, that is, "How well did the gifted students do?" At this time, the answer to the question, "What are the effects of cooperative learning on gifted students?" is, "We don't know." However, numerous anecdotal reports make it clear that the inappropriate use of cooperative learning can result in bright students spending enormous amounts of time teaching other students material they (the gifted students) already know, or could learn rapidly on their own. While a comprehensive review of this issue is beyond the scope of this document (see Robinson, 1990a), a few guidelines may be helpful.

A. Recognize the limitations of the research base on gifted students and cooperative learning. Do not allow cooperative learning to be substituted for appropriate programming for gifted and talented. There is no evidence it does so effectively.

B. Monitor the amount of time spent in cross-ability cooperative learning groups. A limited amount of time in such groups may provide variety and interest for some bright students. However, it is essential that students' time be considered a valuable and fixed resource.

Like all educational endeavors, cooperative learning activities must be examined to determine if they are the best (or at least a valuable) use of students' limited time. For bright students, sometimes the question is not, "Should students be learning this material as a large group or in cooperative groups?", but, "Should they be 'learning' it at all?" For example, the argument could be made that if Rosa gets 100 percent on her spelling test when spelling is taught to the whole class, and 100 percent when she spends the week tutoring her heterogeneous spelling group, that she does "just as well" in cooperative groups while providing assistance (and perhaps higher spelling scores) to others. Perhaps a more appropriate consideration might be, should she be studying these spelling words at all? Did she also get 100 percent on Monday's pretest? How well could Rosa have done if she had spent the spelling time studying more advanced words--or working on a book of poetry? The large majority of research on cooperative learning compares results of cooperative learning groups with large groups studying the same material. In no case has it been compared to gifted students pursuing different, more appropriate tasks.

C. Examine the types of tasks presented in cooperative learning groups. Lower-level tasks with fixed, correct answers provide the least chance that everyone in the group will have the opportunity to make a *bona fide* contribution. If some students already know the answers and others do not, "positive interdependence" is an illusion. The activity then becomes peer tutoring.

Open-ended tasks provide the opportunity for contributions of students from a variety of achievement levels (e.g., *brainstorm all the possible effects if the Spanish rather than the British had settled the Northeast; design a playground made totally of recycled materials*). It may also be appropriate for students with a particular academic strength to participate in cooperative groups in areas of relative weakness, but not in the area in which she/he is particularly advanced.

D. Recognize that heterogeneous cooperative groups do not always entail all group members working on the same material. Some of the more widely researched methods (Slavin's TAI, for example) include individualized instruction within a cooperative framework. It is also essential that all cooperative activities make individual accountability clear to avoid bright students feeling obligated to take on the majority of the instructional load.

E Do not accept the argument that cooperative learning is a cure for the social ills of bright students. The assumption that gifted students have a multitude of social problems that must be cured is not supported by research. "The pill of cooperative learning may be prescribed for a perfectly healthy patient." (Robinson, 1990b, p.35)

7. What is happening in Michigan for gifted and talented students?

Michigan has a full-time consultant for gifted and talented education in the State Department of Education. Categorical aid to intermediate school districts and many local school districts provides limited funding under Section 47 of the State School Aid Act. Michigan also supports Summer Institutes for the Arts, Sciences, and Technology for gifted students, two-week summer experiences for selected secondary students from across the state.

Unlike other areas of special education, services for the gifted and talented are not mandated in Michigan. Consequently, the available programs vary widely among districts. County intermediate school districts have consultants in education of the gifted who provide staff development and consultation, as well as coordinate county-wide services. Some local school districts have comprehensive programs for identified students grades K-12, while others provide very limited service. Appendix D is a summary of the 1990 statewide evaluation of the Section 47 Gifted and Talented Program. While some districts employ teachers and/or coordinators for education of the gifted and talented, there is currently no special certification or endorsement for teaching gifted and talented in Michigan. The statewide professional and advocacy organization for gifted and talented is the Michigan Alliance for Gifted Education (see Resource List in Appendix E).

8. How does gifted education fit into 1990 PA 25?

Public Act 25 of 1990 has an overall goal to raise the standards and improve the quality of education for each Michigan student. Achieving that goal depends on providing educational opportunities based on individual students' strengths and needs, which include the gifted and talented, as well as other special needs students. The model core curriculum, required by PA 25, encourages schools to upgrade the quality of their educational programs and tailor outcomes to the needs of individuals. Equal educational opportunity is central in the implementation of the core curriculum. Provision must be made for the individual needs of students through the use of a variety of learning styles, pedagogical practices, and different time allotments. In addition to achieving the core curriculum outcome, students should have the opportunity to participate in other curricular activities based upon individual interests and desires for specialization.

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APPENDIX A

Profiles of Gifted Children
by Karen Rogers

Reprinted from MCGT News, March/April 1988

Read the following profiles. Look for similarities and differences among the children.

TED

Let's start with Ted. Ted may or may not be good looking. He may or may not be good at sports, and he may or may not act like a nerd. Likewise, he may or may not be the first one to raise his hand when the teacher asks questions in a discussion, but one thing teachers have noticed about Ted: he seems to be very deep. If awards were being given out by peers, Ted would be sure to be voted "most intellectual." Everything about Ted perks up when a teacher suggests a new point of view, perhaps only in passing. James Burke, the author, or Margaret Mead, the cultural anthropologist, could easily be the role models for the boys and girls who fit Ted's profile. These are people who structure ideas cross historical and human developments.

Ted has both endearing and aggravating behaviors in the classroom. He may appear very slow and deliberate at times, especially when quick answers are being sought to low level questions. He sometimes seems to make too much of what was a simple question. He runs on his own timelines, which means there are times when he is out of sorts because he has to put a project down and turn to the next subject. He is usually very systematic and logical, which can make him very uncomfortable with a teacher's attempts at creativity. He is not a willing risk-taker and wants structure in many cases when long-term assignments are given. When questions are asked in class, Ted can be annoying at times when he consistently re-words the question before answering. It is very hard to find enough extra assignments to keep him busy in subjects such as mathematics and science where generally the class is being taught the facts of that content area. He appears to sop up information as quickly as it can be dished out.

Ted scores very highly on almost every aptitude and achievement test, and will usually have top notch grades. Yet, he may be a serious underachiever because he is not being offered enough content or enough complexity to that content, nor has compaction of his curriculum taken place. Anywhere from three to six years of Ted's life may be spent without learning a single new idea or concept in school. The only characteristic that may keep Ted from pure disillusionment with school may be his own perseverence and patience, waiting for the day when school will be "hard and fun."

MARCY

Marcy is a constant hand-raiser when social studies class is in session. She knows every answer to the teacher's questions in that class. She has read every children's book and a great many adult books on the Civil War, in particular. No matter what the subject in social studies, she can find some way to relate it to something she has read about the Civil War. She probably knows more about that period of history than her teachers do. Marcy gets so excited in discussions, however, that she often forgets to let other children have a chance to answer. She often blurts out answers and forgets to raise her hand. It is very important to her to let the teacher and her peers know what she knows.

Unfortunately, Marcy does not have the same love nor skill for mathematics. Her test scores are consistently below grade level and she displays no interest in working hard to bring up that area. More than one of her teachers suspects that if there were a way to relate basic math facts to events in the Civil War, she would learn them easily. Marcy was by-passed for the gifted program in her school, despite the fact that many of the enrichment activities planned involved social studies. Her classroom teacher would not let her be considered because of her poor perfomance in math class. She was, of course, highly disappointed. Probably the major reasons Marcy will continue to go along with the system in years to come will be her natural love of learning, and the cognitive support for her talent area which she receives at home and from the occasional teacher who values the specialized gift Marcy possesses.

JIM

Jim is flamboyant in his dress, into the punk scene currently, but a real charge to be around. His excitement when he thinks of an idea is contagious, as is his sense of humor. His school performance is spotty, to say the least. In classes where the teacher recognizes and respects his fine, original mind, he outdoes himself in the quality and quantity of his work. But in classes where "no exceptions are made," where assignments are rigid and deadlines are enforced, Jim refuses to produce and fails. This happens regularly within every subject area in high school. He failed the Rhetoric class but aced the Creative Writing class. Geometry was a whiz for Jim, but Mathematics Analysis represents another low grade. One can almost predict in which classes Jim will do poorly by the teacher he is assigned.

As a result, Jim's general skill levels are poor and there is some question about whether Jim will be able to get into college. Unlike Marcy, he has no specialized talent area at present, and for him to be able to fully use his high degree of originality, he must become an "expert" in some area. Without that, his creativity will probably never be fully utilized. He may end up being like the creative garbage collector who fashioned the unusual junk sculptures featured on Bill Moyers' PBS series on creativity.

There is no doubt that Jim will be happy in adulthood; he has the natural flexibility to rearrange events for his own comfort. However, it will be a severe loss for our society if Jim's creativity is not channeled into finding solutions and reformulating problems that we have been grappling with for years.

JACKIE

Jackie has the uncommon knack of getting along with almost everyone. She seems to genuinely like everyone she meets and those feelings are almost instantly mutual. She is very perceptive in understanding other people's feelings and concerns; at times she has almost painful experiences when her empathy gets the best of her. Her parents tell of the time she cried and cried after seeing a documentary about the children starving in Ethiopia. She kept asking, "Why can't I help them? What can I do?" She was six years old at the time.

In elementary school, Jackie got along well with teachers because she was so dependable. When teachers wanted group projects done for parents' night, they knew that putting Jackie in charge of the project would result in a high quality, flashy project that every parent would perceive as a successful classroom experience. Jackie, of course, put in loads of extra time getting the project completed, time she seemed to genuinely enjoy despite the fact that others in her group were not doing their part.

In secondary school, Jackie is well known for her wide participation in competitions, sports, fund raising efforts, cheerleading, student council and yearbook. She is always looking for new experiences, and before long she has gravitated into some kind of leadership role within any organization she joins. In the classroom, her ideas are looked up to by her classmates. She has the knack of relating almost any content to the human situation, or at least to everyday relevance.

There are problems for Jackie in school, too. It is easy for her enthusiasm for new experiences to lead her to spread herself too thin. Often this means that her extracurricular activites take up more time than her schoolwork. So far she has been able to get along on her finely tuned intuitive sense, but as her course work becomes more difficult she may find that she has not acquired enough content or skills to let her get by on so little time for study and reflection.

GENE

Gene or Jean (to represent an equality of the sexes among our five profiles) has always "marched to a different drummer." Life for this child has been filled with perfecting a wonderful ability for playing the violin. This has meant getting up at 5:00 a.m. to practice for a couple of hours before getting ready for school, rushing to private music lessons after school is over, and practicing for a few more hours in the evening before going to bed. Those teachers who know how much time Gene spends on practicing are vocal in calling this "unhealthy" and "not normal." Gene's parents have constantly heard teachers say to them in conferences that "if only Gene would put into his/her homework what is put into music, she/he would be a straight A student!" There is no question that Gene is very bright academically. There are flashes of this in class when there are

competitions, especially with tasks such as telling if two things are alike in appearance or in meaning. Gene has an amazing eye for details.

Socially, Gene is kind of in the middle. She/he has one or two close friends (who are usually involved in some kind of artistic endeavor), but beyond that, does not seem overly concerned about acquiring a large group of acquaintances. His/her usual topic of conversation has something to do with music or some distantly related idea concerning music. Most of the kids find this either boring or just don't understand why she/he finds that so interesting.

APPENDIX B

SMALL GROUP ACTIVITIES

Some professionals may prefer to use a small group/cooperative learning approach rather than a series of lectures in presenting this module. In that case, the module itself, in place of or in addition to the six student descriptions, would be used as an independent reading assignment. Class time could then be used to process rather than present information. The following is a menu of small group activities that could be used in a more elaborated fashion in small groups. It is not expected that any group would use all the suggested experiences, but that activities be selected to reflect group background and needs.

1. Divide the class into four expert groups each concerned with one conception of giftedness: Sternberg's conception, Gardner's multiple intelligences, Renzulli's three-ring conception, and the federal/Michigan definition. Each group should make sure its members can explain their definition and describe how such giftedness could be manifested in children. Additional readings could be provided if desired. The class should then "jigsaw" into mixed groups, with each expert responsible for clarifying specific content. Each mixed group should decide together which definition of giftedness they would prefer to use in developing an identification system for a gifted program. Why?

2. Have students imagine a totally new culture discovered on another planet or beneath our oceans. In pairs, ask them to brainstorm what behaviors they might consider to be gifted in that culture. Why would those be considered gifted behaviors?

3. Have small groups brainstorm a list of 15 individuals (living or dead) they consider to be gifted. According to which definition(s) are they gifted? (At the end of the activity, you may wish to analyze the proportions of males/females named. Why? What does this imply for the education of bright young girls?)

4. Examine the list of characteristics on T-10. Have each small group choose five characteristics and describe how they might be displayed in behaviors that might be considered positive or negative in the classroom. Try to identify at least one characteristic that might be manifested differently as a result of a disability or cultural differences.

5. Have a guest speaker representing a particular culture. Discuss with him/her, behaviors that are nurtured and valued in that culture. How do they relate to the characteristics traditionally associated with giftedness? Should identification procedures be altered for members of that culture?

6. Divide the class into five groups for the five organizational patterns described for gifted programs: homogeneous full-time classes, single subject classes, pull-out programs, individual acceleration, and cluster grouping. Using the four major issues identified by the Michigan State Board as criteria (see T-12), identify strengths and weaknesses of each pattern and report to the class. What other criteria might be used in selecting program options?

7. Have students examine the sample identification checklists in Appendix C. In pairs, have them try to determine the definition of giftedness being used in each. What similarities or differences can be noted?

8. Show a videotaped lesson of a regular classroom. Ask students to view it as a "talent scout." Have them watch for students who give original responses, or those demonstrating advanced prior knowledge or critical thinking. They might want to jot down notes as if they were keeping anecdotal records and compare insights.

9. Have students examine the teacher's manual of a textbook from a grade they may teach. Identify which components, if any, might be used for preassessment. Compare texts in small groups. Are some easier to use in this way? Look at the scope and sequence chart. If a teacher identified a skill needed by a particular child, could she/he easily locate needed materials or activities?

10. Use the SIMSIT "*What Should We Do For Joanie?* " at the end of this section. It will probably work best in pairs or small groups. What parts of the regular curriculum does Joanie need? What else might she do? You may create a simplified Compactor by dividing a piece of paper into three columns. The first column should list evidence of Joanie's strength areas and the results of her pretest. The second column should outline how Joanie will learn the parts of the regular curriculum (in this unit) she still needs to master. In the third column should be listed enrichment or acceleration activities to be used in place of already mastered material.

11. Using the plant unit suggested (T28-T33), or other familiar topic, have students plan enrichment in each of the following ways: add depth using Bloom's taxonomy or breadth by webbing related topics, create cross disciplinary ties around a broad based theme (for example, growth and change), plan individual or small group investigations that would involve students in authentic methodology of a botonist. What products might be developed to share these projects? The three types of enrichment may be brainstormed by the whole class or three subgroups.

12. Have students read excerpts from autobiographies of gifted adults. What evidence do they find of special affective needs in childhood?

13. Have students interview the parent of a very bright student, or have the parent come to class. What social or emotional needs has the parent noticed? How have they been met? You may what to consider inviting the parent of a gifted learning-disabled child. How was the child identified as gifted learning-disabled? How does the disability affect the student's emotional well being?

14. Have a class debate or point/counterpoint on the effectiveness of cooperative learning for gifted students. Under what circumstances is it appropriate? Not appropriate?

15. Invite a local ISD consultant for gifted and talented to speak to the class about local programs and services. If the consultant is willing, you may wish to videotape the presentation for use another semester.

FACILITATOR'S GUIDE

SIMSET #8: What Should We Do for Joanie?
A Simulation on Curriculum Compacting

Teacher Training Objectives:

1. *Major Objective.* To familiarize resource teachers with strategies to be used in helping classroom teachers to compact regular curricular material.

2. To train classroom teachers in the methodology of compacting classroom regular compacting material including: assessing strengths, documentary proficiency and replacing previously mastered material with more challenging work (based on student interests whenever possible).

Number of Persons Involved:

1. Two teams of two persons per team.

2. Entire group may participate in teams of two persons per team (strongly suggested).

Approximate Time: 45 minutes to one hour.

Materials and Equipment:

Directions for Classroom Teachers
Directions for Resource Teacher
Blank Compactor Forms

Directions:

Two teams, each consisting of a resource teacher and a classroom teacher, should be formed. Each person should be given the appropriate set of directions and asked to leave the room for a few minutes to practice their respective roles. the resource teacher should *also* receive the directions for the classroom teacher.
While the participants are practicing their roles, review both sets of directions with the remainder of the group (who will serve as observers). Ask the group to observe during the simulations. ask the first team (one resource teacher and one classroom teacher) to return to the room.

Reproduced with permission from Renzulli, J.S. & Reis, S.M. *The Schoolwide Enrichment Model: A Comprehensive Plan for Educational Excellence.* Mansfield Center, CT: Creative Learning Press, Inc., 1985.

SIMSIT: What Should We Do for Joanie?
A Simulation on Curriculum Compacting

Directions (*continued*)

The resource teacher should begin the simulation by asking the classroom teacher how she is doing with the compacting process. The role of the resource teacher should be to provide advice, encouragement and practical suggestions to aid the classroom teacher in completing the form. The goal of this simulation is to have each person complete The Compactor.

Even though the subject matter to be compacted is mathematics, the resource teacher should be encouraging the classroom teacher to think about Joanie's entire curriculum and gently encouraging her to consider compacting in other subject areas.

This discussion should be allowed in come to a natural resolution, but should not exceed 15 minutes. You may wish to tape record the discussion for review purposes afterward. After the first team has completed the simulation, the second team should be invited into the room to begin the simulation. After both teams have participated in the simulation, ask the observers to comment on good strategies and on the individual styles of the classroom teachers and resource teachers they observed during the simulation.

At this point you, as the facilitator, should encourage the group to draw up or brainstorm a list of do's and don'ts about the process of curriculum compacting. A list of suggestions for classroom teachers and resource teachers might also be brainstormed.

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Directions for the Classroom Teacher

Using considerable persuasion, Joanie's resource teacher has convinced you, her classroom teacher, that Joanie could be compacted in math in order to provide time to work in the resource room. Since your math group is about to begin Unit 4 on division, you have given Joanie the Unit Test as a pretest. Her pretest and Strength-A-Lyzer have been provided. Using the pretest as a guide, complete a Compactor for Joanie. You have available the Unit Test, a parallel Extra Unit Test, and Practice Masters for each skill. The following questions may serve as guidelines.

Column 1:

What regular curricular material is to be compacted?

What are Joanie's general indications of strength in this area?

What specific material has been mastered? How do you know?

Column 2:

What pages in Unit 4 might be eliminated for Joanie?

What skills are still needed? What activities could be used to teach those skills?

How will you assess mastery of needed skills?

Column 3:

If Joanie were not already involved in a Type III project, what enrichment and/or acceleration activities might be planned?

Your goal is to begin the process of compacting curriculum with the aid of the resource teacher in your building. You are trying to find the time for her to be in the resource room. You are also trying to increase the challenge level of her classroom experience by eliminating work that Joanie has already mastered.

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SIMSIT: What Should We Do For Joanie?
A Simulation on Curriculum Compacting

Directions for the Resource Teacher

It has taken you two months to convince Joanie's teacher to try to compact her curriculum. You've been telling her you'll help her in every way possible. Now that Joanie's teacher has agreed, your job is to help her complete The Compactor. The teacher has said that Joanie is good in math but Joanie has complained of boredom in other subject areas, too. The task now is to not only help Joanie's teacher complete The Compactor in Math but also to have her consider other areas for possible compacting. Review the classroom teacher's set of directions and make sure that you understand the compacting process so that you can provide the necessary assistance.

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INDIVIDUAL EDUCATIONAL PROGRAMMING GUIDE

Strength - A- Lyzer

Prepared by: Joseph S Renzulli
Linda H Smith

NAME Joan Sutton AGE 10 TEACHER(S) _____

SCHOOL Brookside GRADE 5 PARENT(S) _____

Individual Conference Dates And Persons Participating In Planning Of IEP

_____ _____ _____ _____

ABILITIES

INTELLIGENCE - APTITUDE - CREATIVITY

In the spaces below, enter the results of standardized test scores and circle all scores above the _____ percentile

Test	Area	Date	Raw Score	Grade Equiv	% ile
	IQ		126		94
CTBS	Composite				97
	Reading				99
	Math				99

TEACHER RATINGS

In the spaces below, enter the scores from the Scale for Rating Behavioral Characteristics of Superior Students. Circle unusually high scores.

Scale	Score	Group Mean	Scale	Score	Group Mean
(Learning)	28		Musical		
Motivation	25		Dramatic		
(Creativity)	29		Comm. Precision		
Leadership	24		Comm. Expressive		
Artistic			Planning		

END OF YEAR GRADES

Enter final grades for the past two years

	Gr3	Gr4		Gr3	Gr4
Reading	A	A	Art	A	A
Mathematics	A	A	Foreign Language		
Language Arts	A	A	Other		
Social Studies	B+	A	Other		
Science	A	A			
Music	B	A			

☐ Check here if additional assessment information is recorded on the reverse side

INTERESTS

As a result of student responses to the Interest-A-Lyzer or other interest assessment procedures, indicate the general area(s) in which levels of interest seem to be High, Average and Low

	H	A	L		H	A	L
Fine Arts/Crafts	X			Managerial			X
Scientific/Technical		X		Business			
Literary/Writing	X			Historical		X	
Political/Judicial			X	Performing Arts		X	
Mathematical	X			Other			
Athletics			X	Other			

SPECIFIC AREAS OF INTEREST

As a result of individual discussions with the student, indicate particular topics, issues, or areas of study in which the student would like to do advanced level work

Short Story Writing
Poetry
Mathematical puzzles and games

LEARNING STYLES

Enter the scores from the Learning Styles Inventory in the spaces below. Circle the highest area(s)

Learning Style	Score	Learning Style	Score
Projects	42	Teaching Games	30
Simulations	26	Independent Study	45
Drill and Recitation	30	Programmed Instruction	1.0
Peer Teaching	41	Lecture	2.0
Discussion	32		

Comments regarding informal observations about Learning Styles and relationships between areas of interest and learning styles

Joanie is an excellent independent worker, but can also fit into group situations. She seems to adapt to the task at hand.

SUMMARY AND RECOMMENDED ACTION BASED ON ASSESSMENT INFORMATION

In the space below summarize (1) strengths, interests, and learning styles, (2) areas in which remedial work or additional skill building appears to be warranted, and (3) specific higher mental processes and advanced skills that should be developed.

Joanie is extremely strong in all basic skills areas and shows above average ability as an independent worker. She is an avid reader with a flair for creative writing and love of literature. Joanie interacts well with her peers and participates actively in group situations. At times this can be a problem for her, as she will "go along" with the group rather than pursue her own interests.

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Unit Test

26/30 Joanie

Divide. (pages 74-77)

1. 8)26 — 3 R2
2. 9)30 — 3 R3
3. 7)280 — 40
4. 5)403 — 80 R3

Divide. (pages 78-81)

5. 2)61 — 30 R1
6. 6)141 — 23 R3
7. 5)357 — 71 R2
8. 4)273 — 68 R1
9. 6)448 — 74 R4
10. 8)598 — 74 R4
11. 7)653 — 93 R2
12. 9)758 — 84 R2

Divide. (pages 82-87)

13. 3)730 — 243 R1
14. 5)3714 — 742 R4
15. 8)8706 — 338 R1
16. 4)9471 — 2367 R3
17. 6)38,143 — 6357 R1
18. 5)204 — 40 R4
19. 7)4937 — 705 R2
20. 8)5128 — 640 R6

Divide. (pages 88-89)

21. 20)65 — 3 R5
22. 40)384 — 9 R24
23. 30)245 — 8 R5
24. 80)766 — 9 R46

Write the GCF of each pair of numbers. (pages 90-91)

25. 8 and 12?
26. 15 and 45?
27. 16 and 40?
28. 18 and 51?

What does GCF mean?

Solve. (page 92)

29. What is the cost of 94 bottles of soda at 20¢ a bottle? $18.80
30. How many 20-cent bottles can be bought with 94¢? 4 bottles

Extra Unit Test

This unit test parallels the unit test in the student's text. It may be used as a review for the unit test in the student's text or as the unit test itself. Also included in this Teacher's Edition (see Resources chart) is an extra unit test in multiple-choice format.

Divide. (pages 74-77)

1. 7)23 — 3 R2
2. 8)21 — 3 R3
3. 5)204 — 40 R4
4. 3)271 — 90 R1

Divide. (pages 78-81)

5. 3)68 — 22 R2
6. 9)210 — 23 R3
7. 4)262 — 65 R2
8. 2)137 — 68 R1
9. 7)522 — 74 R4
10. 5)374 — 74 R4
11. 3)281 — 93 R2
12. 6)506 — 84 R2

Divide. (pages 82-87)

13. 3)830 — 276 R2
14. 6)4458 — 742 R4
15. 4)3352 — 838
16. 5)11,835 — 2 367
17. 2)12,715 — 6 357 R1
18. 9)364 — 40 R4
19. 8)5642 — 705 R2
20. 7)4234 — 604 R6

Divide. (pages 88-89)

21. 20)82 — 4 R2
22. 70)654 — 9 R24
23. 60)485 — 8 R5
24. 90)856 — 9 R46

Write the GCF of each pair of numbers. (pages 90-91)

25. 12 and 15 — 3
26. 15 and 30 — 15
27. 24 and 40 — 8

Solve. (page 92)

28. What is the cost of 83 tickets at 40¢ each? $33.20
29. How many 40-cent tickets can be bought with 83¢? 2 tickets

Resources

Practice Master	4-10	Teacher's Edition	
Review Lesson	4-10	Laboratory Activity p. 97a	
Enrichment Activity	4-10	Math News p. 97c	
Test 4—Problem Solving		Multiple-choice Test p. 97d	

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Scales for Rating the Behavioral Characteristics of Superior Students

Joseph S. Renzulli / Linda H. Smith / Alan J. White / Carolyn M. Callahan / Robert K. Hartman

Name _____ Date _____

School _____ Grade _____ Age _____

Teacher or person completing this form _____

How long have you known the child? _____ Months.

Part I: Learning Characteristics

	1 Seldom or never	2 Occasionally	3 Considerably	4 Almost always
1. Has unusually advanced vocabulary for age or grade level; uses terms in a meaningful way; has verbal behavior characterized by "richness" of expression, elaboration, and fluency.	☐	☐	☐	☐
2. Possesses a large storehouse of information about a variety of topics (beyond the usual interests of youngsters his age).	☐	☐	☐	☐
3. Has quick mastery and recall of factual information.	☐	☐	☐	☐
4. Has rapid insight into cause-effect relationships; tries to discover the how and why of things; asks many provocative questions (as distinct from informational or factual questions); wants to know what makes things (or people) "tick."	☐	☐	☐	☐
5. Has a ready grasp of underlying principles and can quickly make valid generalizations about events, people, or things; looks for similarities and differences in events, people, and things.	☐	☐	☐	☐
6. Is a keen and alert observer; usually "sees more" or "gets more" out of a story, film, etc. than others.	☐	☐	☐	☐
7. Reads a great deal on his own; usually prefers adult level books; does not avoid difficult material; may show a preference for biography, autobiography, encyclopedias, and atlases.	☐	☐	☐	☐
8. Tries to understand complicated material by separating it into its respective parts; reasons things out for himself; sees logical and common sense answers.	☐	☐	☐	☐
Add Column Total	☐	☐	☐	☐
Multiply by Weight	1	2	3	4
Add Weighted Column Totals	☐ >	☐	☐ >	☐
Total				☐

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Scales for Rating the Behavioral Characteristics of Superior Students

Joseph S. Renzulli / Linda H. Smith / Alan J. White / Carolyn M. Callahan / Robert K. Hartman

Name _____ Date _____

School _____ Grade _____ Age _____

Teacher or person completing this form _____

How long have you known the child? _____ Months.

Part II: Motivational Characteristics

	1 Seldom or never	2 Occasionally	3 Considerably	4 Almost always
1. Becomes absorbed and truly involved in certain topics or problems; is persistent in seeking task completion. (It is sometimes difficult to get him to move on to another topic.)	☐	☐	☐	☐
2. Is easily bored with routine tasks.	☐	☐	☐	☐
3. Needs little external motivation to follow through in work that initially excites him.	☐	☐	☐	☐
4. Strives toward perfection; is self critical; is not easily satisfied with his own speed or products.	☐	☐	☐	☐
5. Prefers to work independently; requires little direction from teachers.	☐	☐	☐	☐
6. Is interested in many "adult" problems such as religion, politics, sex, race — more than usual for age level.	☐	☐	☐	☐
7. Often is self assertive (sometimes even aggressive); stubborn in his beliefs.	☐	☐	☐	☐
8. Likes to organize and bring structure to things, people, and situations.	☐	☐	☐	☐
9. Is quite concerned with right and wrong, good and bad; often evaluates and passes judgment on events, people, and things.	☐	☐	☐	☐
Add Column Total	☐	☐	☐	☐
Multiply by Weight	1	2	3	4
Add Weighted Column Totals	☐ >	☐ >	☐ >	☐
Total				☐

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Scales for Rating the Behavioral Characteristics of Superior Students

Joseph S. Renzulli / Linda H. Smith / Alan J. White / Carolyn M. Callahan / Robert K. Hartman

Name _____ Date _____

School _____ Grade _____ Age _____

Teacher or person completing this form _____

How long have you known the child? _____ Months.

Part III: Creativity Characteristics

	1 Seldom or never	2 Occasionally	3 Considerably	4 Almost always
1. Displays a great deal of curiosity about many things; is constantly asking questions about anything and everything.	☐	☐	☐	☐
2. Generates a large number of ideas or solutions to problems and questions; often offers unusual ("way out"), unique, clever responses.	☐	☐	☐	☐
3. Is uninhibited in expressions of opinion; is sometimes radical and spirited in disagreement; is tenacious.	☐	☐	☐	☐
4. Is a high risk taker; is adventurous and speculative.	☐	☐	☐	☐
5. Displays a good deal of intellectual playfulness; fantasizes; imagines ("I wonder what would happen if . . ."); manipulates ideas (i.e., changes, elaborates upon them); is often concerned with adapting, improving and modifying institutions, objects, and systems.	☐	☐	☐	☐
6. Displays a keep sense of humor and sees humor in situations that may not appear to be humorous to others.	☐	☐	☐	☐
7. Is unusually aware of his impulses and more open to the irrational in himself (freer expression of feminine interest for boys, greater than usual amount of independence for girls); shows emotional sensitivity.	☐	☐	☐	☐
8. Is sensitive to beauty; attends to aesthetic characteristics of things.	☐	☐	☐	☐
9. Nonconforming; accepts disorder; is not interested in details; is individualistic; does not fear being different.	☐	☐	☐	☐
10. Criticizes constructively; is unwilling to accept authoritarian pronouncements without critical examination.	☐	☐	☐	☐
Add Column Total	☐	☐	☐	☐
Multiply by Weight	1	2	3	4
Add Weighted Column Totals	☐ >	☐ >	☐ >	☐
Total				☐

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Name _____ Date _____

School _____ Grade _____ Age _____

Teacher or person completing this form _____

How long have you known the child? _____ Months.

Part IV: Leadership Characteristics	1 Seldom or never	2 Occasionally	3 Considerably	4 Almost always
1. Carries responsibility well; can be counted on to do what he has promised and usually does it well.	☐	☐	☐	☐
2. Is self confident with children his own age as well as adults; seems comfortable when asked to show his work to the class.	☐	☐	☐	☐
3. Seems to be well liked by his classmates.	☐	☐	☐	☐
4. Is cooperative with teacher and classmates; tends to avoid bickering and is generally easy to get along with.	☐	☐	☐	☐
5. Can express himself well; has good verbal facility and is usually well understood.	☐	☐	☐	☐
6. Adapts readily to new situations; is flexible in thought and action and does not seem disturbed when the normal routine is changed.	☐	☐	☐	☐
7. Seems to enjoy being around other people; is sociable and prefers not to be alone.	☐	☐	☐	☐
8. Tends to dominate others when they are around; generally directs the activity in which he is involved.	☐	☐	☐	☐
9. Participates in most social activities connected with the school; can be counted on to be there if anyone is.	☐	☐	☐	☐
10. Excels in athletic activities., is well coordinated and enjoys all sorts of athletic games.	☐	☐	☐	☐
Add Column Total	☐	☐	☐	☐
Multiply by Weight	1	2	3	4
Add Weighted Column Totals	☐ >	☐ >	☐ >	☐

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RICHLAND COUNTY PUBLIC SCHOOLS

TALENTED AND GIFTED PROGRAM

PARENT QUESTIONNAIRE

NAME _____ DATE _____

SCHOOL _____ GRADE _____

BIRTHDATE _____

A. What special talents or skills does your child have? _____

_____

_____

Give examples of behavior that illustrates this _____

_____

_____

B. Check the following items as best describes your child as you see him or her.

	Little	Some	A Great Deal
1. Is alert beyond his years			
2. Likes school			
3. Has interests of older children or of adults in games and reading			
4. Sticks to a project once it is begun			
5. Is observant			
6. Has lots of ideas to share			
7. Has many different ways of solving problems			
8. Is aware of problems others often do not see			
9. Uses unique and unusual ways of solving problems			
10. Wants to know how and why			
11. Likes to pretend			
12. Other children call him/her to initiate play activities			
13. Asks a lot of questions about a variety of subjects			
14. Is not concerned with details			
15. Enjoys and responds to beauty			
16. Is able to plan and organize activities			
17. Has above average coordination, ability and ability in organized games			
18. Often finds and corrects own mistakes			
19. Others seem to enjoy his/her company			
20. Makes up stories and has ideas that are unique			

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	Little	Some	A Great Deal
21. Has a wide range of interests			
22. Gets other children to do what he/she wants			
23. Likes to play organized games and is good at them			
24. Enjoys other people and seeks them out			
25. Is able and willing to work with others			
26. Sets high standards for self			
27. Chooses difficult problems over simple ones			
28. Is able to laugh at himself (if necessary)			
29. Likes to do many things and participates whole-heartedly			
30. Likes to have his/her ideas known			

C. Reading interests (favorite type of books and/or titles of favorite books) _____

D. Favorite school subjects _____

E. General attitude toward school _____

F. Hobbies and special interests (collections, dancing, making models, swimming, singing, painting, cooking, sewing, drama, etc.) _____

_____

G. What special lessons, training or learning opportunities does your child have outside of school _____

_____

H. What are some of the influences at home or at school that may negatively influence your child's performance in school _____

_____

I. What other things would you like us to know that would assist us in planning a program for your child _____

_____

J. Favorite playtime, leisure time activity _____

_____

K. What do you feel are your child's special school needs _____

_____

L. What types of trips has your child taken _____

_____

M. What are your child's vocational goals _____

_____

COMMUNITY CONSOLIDATED SCHOOL DISTRICT #146
O.R.E. PROJECT

TEACHER NOMINATION FORM--Gr. K-8

Teacher_____ Grade_____ School_____

INSTRUCTIONS: Place the numerical code in each box for each students' skill ability. Tally the total.

CODE: 1 = Average
2 = Above average
3 = Highly superior

ABILITY	Student Name								
1. Learns rapidly, easily, efficiently.									
2. Reasons things out, uses logic; makes good decisions; organizes tasks well.									
3. Understands abstract ideas readily; recognizes relationships and implications.									
4. Uses a large vocabulary with accuracy.									
5. Level of academic work.									
Sub-total									
TASK COMMITMENT									
1. Is a self-starter; shows initiative.									
2. Is able to maintain long periods of concentration.									
3. Follows through and completes tasks on time or before.									
4. Is willing to spend more time than required on subjects that interest him/her.									
5. Has one or more strong interests; seeks complex and challenging activities.									
Sub-Total									
CREATIVITY									
1. Displays great curiosity and imagination.									
2. Generates many solutions or alternatives.									
3. Is a risk-taker; shows independence.									
4. Reveals originality in oral or written work; gives unusual, unique, or clever responses.									
5. Shows elaborate respones by the use of detail.									
Sub-Total									
GRAND TOTAL									

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PURDUE ACADEMIC RATING SCALE: MATHEMATICS

STUDENT: _____

GRADE: _____ DATE: _____

TEACHER: _____ SCHOOL: _____

Read each item and rate the student according to this scale.

1 Rarely, seldom, or never
2 Occasionally, sometimes
3 Quite often or frequently
4 Always or almost always
DK Don't know or have never observed

_____ 1. Generalizes mathematical relationships, relates concepts in various applications.

_____ 2. Organizes data to discover patterns or relationships.

_____ 3. Persistent in learning math, concentrates, works hard, motivated, interested.

_____ 4. Analyzes problems carefully, considers alternatives, does not necessarily accept first answer.

_____ 5. Resourceful in seeking ways to solve a problem.

_____ 6. Interested in numbers and quantitative relationships, sees usefulness or applications of mathematics.

_____ 7. Learns math concepts and processes faster than other students.

_____ 8. Good at verbalizing math concepts, processes, and solutions.

_____ 9. Identifies and restates problems, good at formulating hypotheses.

_____ 10. Reasons effectively.

_____ 11. Enjoys trying to solve difficult problems, likes puzzles and logic problems.

_____ 12. Visualizes spatially, can create visual images of problems.

_____ 13. Develops unique associations, uses original methods for solutions.

_____ 14. Sometimes solves problems intuitively, then cannot always explain why the solution is correct.

_____ 15. Recalls relevant information or concepts in solving problems, recognizes the critical elements.

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PURDUE ACADEMIC RATING SCALES: ENGLISH

STUDENT:_____

GRADE:_____ DATE:_____

TEACHER:_____ SCHOOL:_____

Read each item and rate the student according to this scale.

1 Rarely, seldom, or never
2 Occasionally, sometimes
3 Quite often or frequently
4 Always or almost always
DK Don't know or have never observed

_____ 1. Interested in words, definitions, derivations; has an extensive vocabulary.

_____ 2. Sees details, is a good observer, sees relationships, makes connections.

_____ 3. Organizes ideas and sequences well in preparation for speaking or writing.

_____ 4. Has a good sense of humor, uses and understands satire, puns, and second meanings.

_____ 5. Reads widely for a period of time in a variety of types of literature, may focus on one type, then switch and focus on another.

_____ 6. Original and creative; comes up with unique ideas in writing or speaking.

_____ 7. Develops convincing characters and situations in writing.

_____ 8. Withholds judgment while investigating a topic, willing to explore a topic in greater depth than other students, curious.

_____ 9. Recognizes author's or speaker's point of view, mood, or intentions.

_____ 10. Elaborates well when speaking or writing, uses vivid expressions which make words "come alive".

_____ 11. Visualizes and translates images into written or spoken forms.

_____ 12. Likes to do independent study and research in areas of interest.

_____ 13. Motivated to write even when writing is not assigned; writes stories, poems, or plays; keeps a journal or diary.

_____ 14. Sees relation between literature and other art forms.

_____ 15. Uses words effectively in writing descriptions and communicating emotions.

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VOCATIONAL AGRICULTURE TALENT IDENTIFICATION SCALE

TEACHER_____ DATE_____

STUDENT _____ GRADE_____

G.P.A. IN VOCATIONAL AGRICULTURE CLASSES_____

TOTAL SCORE ON THE SCALE_____

Read each statement and rate the student according to the following scale:

5 Strongly Agree 3 Uncertain 1 Strongly Disagree
4 Agree 2 Disagree

_____ 1. Shows good mechanical skill in use of tools and equipment.

_____ 2. Shows creativity in adapting or modifying designs or plans when necessary.

_____ 3. Is able to stick with a project and see it through to completion.

_____ 4. Shows interest in new techniques and methods.

_____ 5. Exhibits leadership in shop activities/organizations.

_____ 6. Is able to develop the design for a project.

_____ 7. Asks appropriate or insightful questions to clarify a task or project.

_____ 8. Comes up with good, high-level ideas for a project or for agricultural problems.

_____ 9. Is viewed by other students as showing talents in agriculture classes.

_____ 10. Learns and applies new skills, techniques, or procedures rapidly and easily.

_____ 11. Makes good judgments or evaluations.

_____ 12. Is able to present ideas about a project clearly and effectively.

_____ 13. Understands new ideas and concepts quickly and easily.

_____ 14. Seems to have a lot of ideas.

_____ 15. Is enthusiastic in all or most class activities.

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SAN DIEGO CITY SCHOOLS
Educational Services Division
Gifted and Talented Education

High Potential/GATE Referral Activity Form

This should be done as free association, very rapidly. Will you please take a few minutes to write in the *first* and *last* names of children whose names come into your mind *first* as you look at the terms below? You need not fill every space, and to save time, if you list a child more than once, use his first name and last initial to save time after listing. Thank you very much.

1. Learns easily _____
2. Original, imaginative, creative _____
3. Responsible, can be counted on _____
4. Widely informed _____
5. Persistent, resourceful, self-directed _____
6. Common sense _____
7. Self-confident, well liked _____
8. Inquisitive, skeptical _____
9. Informed in unusual areas _____
10. Artistic _____
11. Outstanding vocabulary, verbally fluent _____
12. Musical _____
13. Independent worker, shows initiative _____
14. Enjoys other people, sociable _____
15. Non conforming, individualistic _____
16. Good judgment, logical _____
17. Flexible, open _____
18. Versatile, many interests _____
19. Shows unusual insights _____
20. Self-assertive, stubborn in beliefs _____
21. Shows high level of sensitivity, empathy _____
22. Has excellent sense of humor _____
23. Like to organize things, people, situations _____
24. Dominates others, directs activities _____

School _____

Teacher _____

Grade Level _____

Type of classroom _____

Date _____

Source: Adapted from Martinson, Ruth A. *The Identification of the Gifted and Talented*. Ventura, CA. Office of the Ventura County Superintendent of Schools.

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EXECUTIVE SUMMARY OF THE STATEWIDE EVALUATION OF SECTION 47 GIFTED AND TALENTED PROGRAM

October 1990

During the 1989-90 school year, a statewide evaluation of gifted and talented programs funded by Section 47 of the State Aid Act was conducted. The evaluation was funded by a grant awarded to Ingham Intermediate School District by the Michigan Department of Education. Funds for this evaluation were appropriated by the State Legislature under the 1989-90 State Aid Act (Section 47.4).

The evaluation was conducted by a team of specialists in gifted and talented education and educational evaluation, working in close cooperation with Michigan Department of Education personnel. Members of the team included:

Dr. Dorothy Armstrong,
Grand Valley State University

Ms. Sue Vogel,
Independent Consultant

Mr. David Kazen
Department of Planning & Evaluation
Ingham Intermediate School District

Ms. Tamara Bashore
Department of Planning and Evaluation
Ingham Intermediate School District

In addition, an advisory committee was established to guide the evaluation.

The intent of this evaluation was to assess the status of gifted and talented programming throughout the state. To accomplish this, the evaluation plan called for a review, analysis and summarization of existing data pertaining to gifted programming, as well as collection and analysis of new and current data on the various programs funded by subsections of Section 47.

The evaluation was conducted in two phases. In the initial phase, evaluation efforts focused on:

1. Compiling information on the history of Gifted and Talented Programming in Michigan, including:

   a) Michigan's position on gifted and talented education;

   b) Michigan's policies on gifted and talented programming, and comparison of these polices with initiatives in other states; and

   c) Michigan's legislative history regarding gifted and talented programming.

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2. Collecting and analyzing data for the three programmatic subsections of Section 47, including:

   a) Data obtained from a survey of ISD gifted and talented consultants regarding the services they provide to the local districts, their perceptions of the status of comprehensive programming at the local district level, and consultants ratings of importance of specific program standards (47.1).

   b) Information compiled from year-end reports submitted by Summer Institute Site directors (47.2); and

   c) Descriptions of local level programming and participants as reported on the Section 47.3 final report form by local districts (47.3).

The summary of findings from these data sources were presented to the State Board of Education in April of 1990, and are included in their entirety in the final report.

In the second phase of the evaluation, data collection was concentrated at the local district level. Several sources of data were collected in an attempt to focus on the impact of gifted and talented programming at the local level and to address indicators of program effectiveness. These data sources were:

1. A statewide survey of local district gifted and talented coordinators and/or contacts designed to elicit information regarding services provided to local districts by ISD consultants, the coordinator/ contacts' perceptions of the status of comprehensive programming on a building by building basis, and ratings of importance and extent of implementation of specific program standards;

2. Information regarding local districts' process for evaluating their gifted and talented programs. Requests for documentation of program evaluation were sent to local school districts which were identified as having conducted program evaluations on the Section 47.3 final report form; and

3. Case studies of 13 local school districts. Site visits were conducted in selected schools in an effort to gather more in-depth and descriptive data about gifted and talented programming in the local schools.

Following are the major findings of the evaluation, each of which is supported and corroborated by data gathered from one or more of the multiple sources in this study.

MAJOR FINDINGS OF THE STATEWIDE EVALUATION OF SECTION 47 GIFTED AND TALENTED PROGRAM

- There has been a dramatic increase in student participation in gifted and talented programs from the 1985-86 school year to the 1988-89 school year. In the 1985-86 school year, which was the second year all Michigan school districts became eligible for funding, and the first year for which data were available, 123,198 students were reported to have participated in programming for the gifted and talented. Three years later, in the 1988-89 school year, 183,367 students were reported as having participated. This represents a 49 percent increase over the three years.

- Many districts initially identified general intellectual and academic areas for gifted and talented programs These areas continue to be emphasized by an increasing number of districts.

  In addition, there is evidence which suggest that districts are increasingly identifying students in these specific areas:

  Creative and Productive Thinking

  Leadership

  Visual and Performing Arts

  However, based on the survey of local district coordinators/contacts, it appears that expansion into talent areas other than general intellectual and academic areas is less widespread.

- The year-end reports submitted by local districts indicate what special programming options are available for gifted and talented students. Special options include such opportunities as seminars, independent study, special clubs, career internships and a variety of other experience for students.

  Comparisons of the data reported in 1985-86 and 1988-89 reveal that considerable expansion has occurred in terms of the options available to students in local district at the elementary, middle school and high school levels. The options that show the most significant increases include special clubs and teams and grade acceleration. This is consistent across elementary, middle school and high school levels. In addition, substantial increases at the high school level are noted for the offering of seminars and opportunities for students to take advantage of dual enrollments.

- According to the responses of local coordinators/contacts, approximately one-third of the local districts have regular, sustained programs or special options currently in place which can serve students in grades K to 12 in areas of gifted and talented education. ISD consultants provided more conservative estimates; they reported that only 12% of the districts they service offer programming which is characterized by articulated programs across all grade levels, and sequenced educational experiences in the various areas of gifted education.

- Survey data from local districts indicate that 54% of the middle and junior high schools across the state have sustained gifted programs in place. At the upper elementary and high school levels, 52% of Michigan's schools offer continuous programs. Thirty-eight percent of the schools are reported to have regular sustained programs in place at the early elementary level, and 5% of the schools were reported to have regular program options in place for special populations of students, such as underachieving and handicapped gifted and talented students.

- Results from the surveys of ISD gifted and talented consultants and local district coordinators/contacts indicate that both groups of educators highly endorse the standards for gifted and talented programming set forth by the Council for Exceptional Children.

  However, when asked to make judgments about the extent of implementation of the standards, it is clear that both ISD and local district survey respondents do not believe that these guidelines have been widely operationalized in the schools.

  Further, the case studies developed for this project indicate that the CEC standards are less than fully implemented in some of the more comprehensive gifted and talented programs throughout Michigan.

- Data from the Section 47.3 final report forms indicated that virtually no difference exists between in-formula and out-of-formula districts in terms of the number of program models and special options available to students.

  Further, when comparing survey responses from local district coordinator/ contacts by in- and out-of-formula, very few differences, each in favor of out-of-formula districts, were found. Where these differences exist, they are related to the extent to which the CEC standards have been implemented.

- Analysis of survey data by region indicated that districts located in Northern Michigan tend to offer programs which are somewhat less comprehensive than programs offered elsewhere in the state.

- The apparent trend which emerged from comparison of survey data by community type was that for local school districts located in rural and town communities there is less evidence of progression towards comprehensive gifted and talented programs.

- Results from the surveys of both ISD gifted and talented consultants and local district coordinators/contacts show a very high level of agreement regarding the services ISD consultants reported providing to local districts, and the services local coordinators/contacts reported requesting and receiving. In addition, local district gifted and talented coordinators/contacts reported that the majority of services provided by the ISDs were perceived as very useful.

- Information obtained through the site visit segment of the evaluation indicates that most of the professional development opportunities available in gifted education are provided through the intermediate school districts.

- Few districts receiving section 47 funds are addressing the issue of program evaluations. Where evaluation efforts are undertaken, they tend to be informal and focus on processes rather than outcomes.

  Moreover, although ISD consultants have been charged with the responsibility of assisting local districts with program evaluation, they infrequently report providing this service and are rarely asked by local districts to assist with evaluations of gifted programs.

- Sufficient funding for gifted and talented programming is a major concern at the local district level. Progress toward comprehensive programming, in the view of local district coordinators/contacts, is contingent upon <u>continued</u> and <u>increased</u> funding from the state.

- In addition to the funds available to Intermediate School Districts under Section 47.1 and to the local level programs funded under Section 47.3, Summer Institutes for the Arts and Sciences have been offered through Section 47.2 funding. High school students selected to participate in the Institutes have continued to report a high level of satisfaction with their educational experiences in the program. Student self-report data also indicates that the Summer Institutes have provided these students with an opportunity to learn more about career options within the arts and sciences. However, evaluation data concerning these programs are limited in nature and scope.

RECOMMENDATIONS BASED UPON FINDINGS OF THE STATEWIDE EVALUATION OF SECTION 47 GIFTED AND TALENTED PROGRAM

1. The Michigan Department of Education is encouraged to establish an ad hoc panel of educators to study this report and its implications for the future of gifted and talented education in the state.

2. The findings of this evaluation should be disseminated to staff in Section 47 programs, superintendents in local and intermediate districts and appropriate professional associations.

3. This evaluation provided data on several indicators of comprehensive programming for gifted and talented students. Given the measures of comprehensive programming, the Michigan Department of Education should evaluate the status of programming in light of the resources that have been expended and the expectations held for the development and expansion of gifted and talented programs.

4. The CEC standards appear to have strong support among Michigan gifted and talented educators. The Michigan Department of Education should, therefore, consider adopting the standards in their present or revised form as guidelines for program development and evaluation.

5. Rural school districts and districts in Northern Michigan appear to offer somewhat less comprehensive gifted and talented programs than those in other types of communities and regions. The Michigan Department of Education should attempt to determine if such inequities, in fact, exist and what might be done to assist districts that are unable to attain acceptable levels of programming.

6. The case studies developed as a part of this evaluation should be reviewed by Michigan Department of Education staff to determine if the programming strategies used in the districts selected for study can be implemented in other districts.

7. The case study approach used in this evaluation may have promise in future evaluations of gifted and talented programs. The Michigan Department of Education may wish to consider using this approach by conducting annual site visits to a limited number of programs.

8. Since local districts rely heavily upon ISD consultants for professional development, an effort should be made to ensure that ISD consultants are knowledgeable and current in terms of the training experiences they provide or sponsor.

9. According to this evaluation, local district staff value the services of their respective ISD consultants. A special effort should be made to communicate this positive finding to ISD consultants and their superintendents.

10. An effort should be made to improve the quality of program evaluation activities in gifted and talented education and to encourage districts that have not conducted evaluations to do so.

11. Local district coordinators/contacts frequently indicate that the limited progress being made in gifted and talented education results from funding which they perceive to be inadequate. While the Michigan Department of Education may not be able to increase

funding, the department may be able to foster cooperative arrangements among districts that result in creative solutions to problems caused by insufficient funding.

12. To date, evaluation efforts for the Summer Institutes for the Arts and Sciences have been limited. The Michigan Department of Education should consider supporting additional evaluation of the institutes funded by Section 47.2.

Appendix E
Resources

STATE AND NATIONAL ORGANIZATIONS RELATED TO EDUCATION OF THE GIFTED

STATE:

Michigan Alliance for Gifted Education
P.O. Box 1732, Warren, MI 48090-1732

NATIONAL:

American Association for Gifted Children
P.O. Box 2745, Dayton, OH 45401

The Association for the Gifted (CEC/TAG)
Council for Exceptional Children, 1920 Association Dr.,
Reston, VA 22091
Membership includes subscription to quarterly,
Journal for the Education of the Gifted

National Association for Gifted Children (NAGC)
NAGC, 1155 15th Street, N.W. Suite 1002,
Washington, D.C. 20005
Membership includes subscription to Gifted Child Quarterly

SUPPORTING EMOTIONAL NEEDS OF THE GIFTED (SENG)
School of Professional Psychology
Wright State University,
P. O. Box 2745, Dayton, OH 45401

ADDITIONAL RESOURCES:

Mary Bailey-Hengesh
Gifted Education Consultant
Michigan Department of Education
Box 30008
Lansing, MI 48909

National/State Leadership Training Institute on the Gifted /Talented
Ventura County
Superintendent of Schools
535 East Main Street
Ventura, CA 93009

PERIODICALS:

The Gifted Child Today
P.O. Box 637
Holmes, PA 19043

Gifted Child Quarterly
National Association for Gifted Children
1155 15th Street NW Suite 1002
Washington, DC 20005

Journal for the Education of the Gifted
The University of North Carolina Press
P.O. Box 2288
Chapel Hill, NC 27515-2288

Roeper Review
Roeper City and Country School
P.O. BOx 329
Bloomfield Hills, MI 48303-0329

Understanding Our Gifted
P.O. Box 18268
Boulder, CO 80308-8268

ADDITIONAL RESOURCES:

Mary Bailey-Hengesh
Gifted Education Consultant
Michigan Department of Education
Box 30008
Lansing, MI 48909

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Superintendent of Schools
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T-1

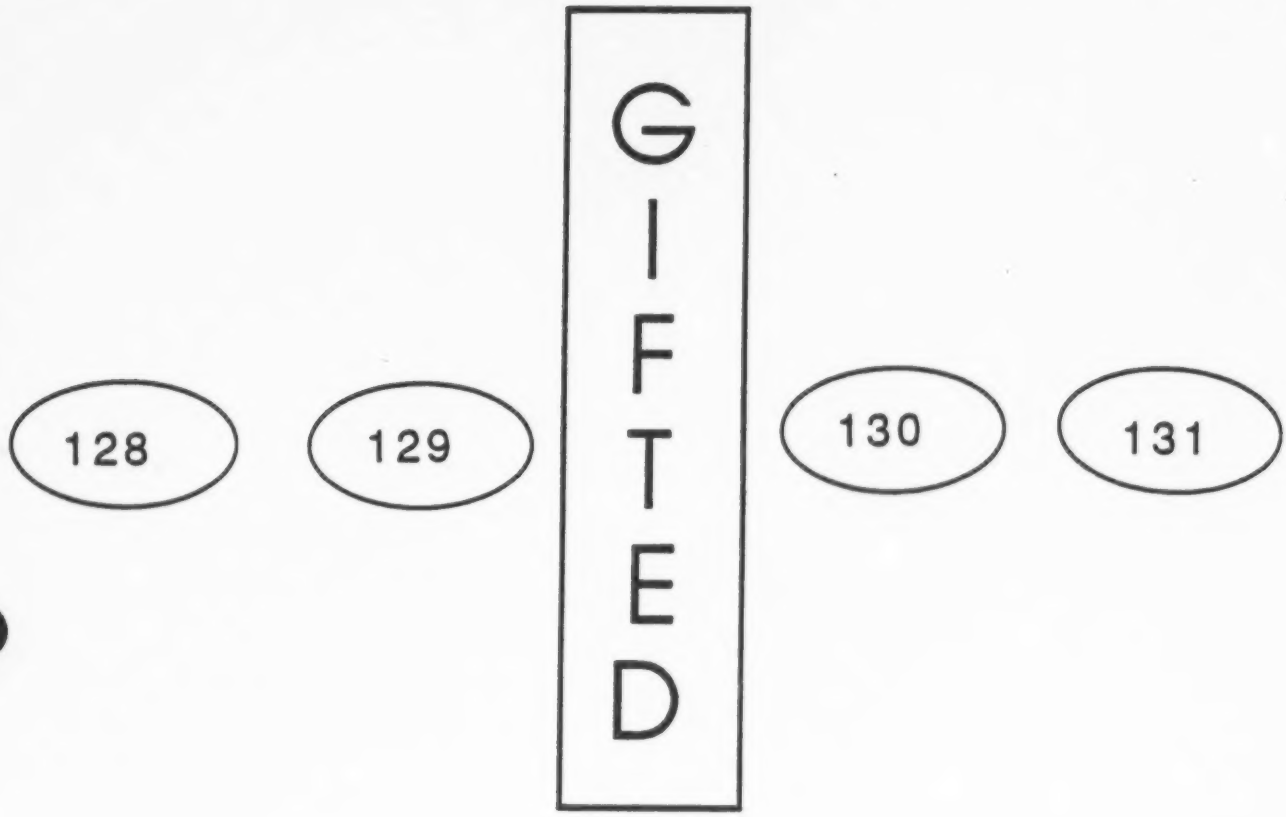
Gifted

T-2

Gifted

Talented

T-3



T-4

Sternberg's Triarchic Theory

Componential System

Response to Novelty

Interaction with the Environment

T-5

Gardner's Multiple Intelligences

Linguistic

Musical

Logical/Mathematical

Spatial

Bodily Kinesthetic

Interpersonal

Intrapersonal

T-6

Renzulli's Three Ring Conception of Giftedness

Reproduced with permission from Renzulli, J.S., Reis, S.M. & Smith, L.H. The Revolving Door Identification Model. Mansfield Center, CT: Creative Learning Press, Inc., 1981.

T-7

State of Michigan Definition:

Gifted and talented children means children, and whenever applicable, youth, who are identified at the preschool, elementary or secondary level, as possessing demonstrated or potential abilities that give evidence of high performance capability in areas such as intellectual, creative, specific academic, or leadership ability, or in the performing and visual arts, and who, by reason thereof, require services or activities not ordinarily provided by the school.

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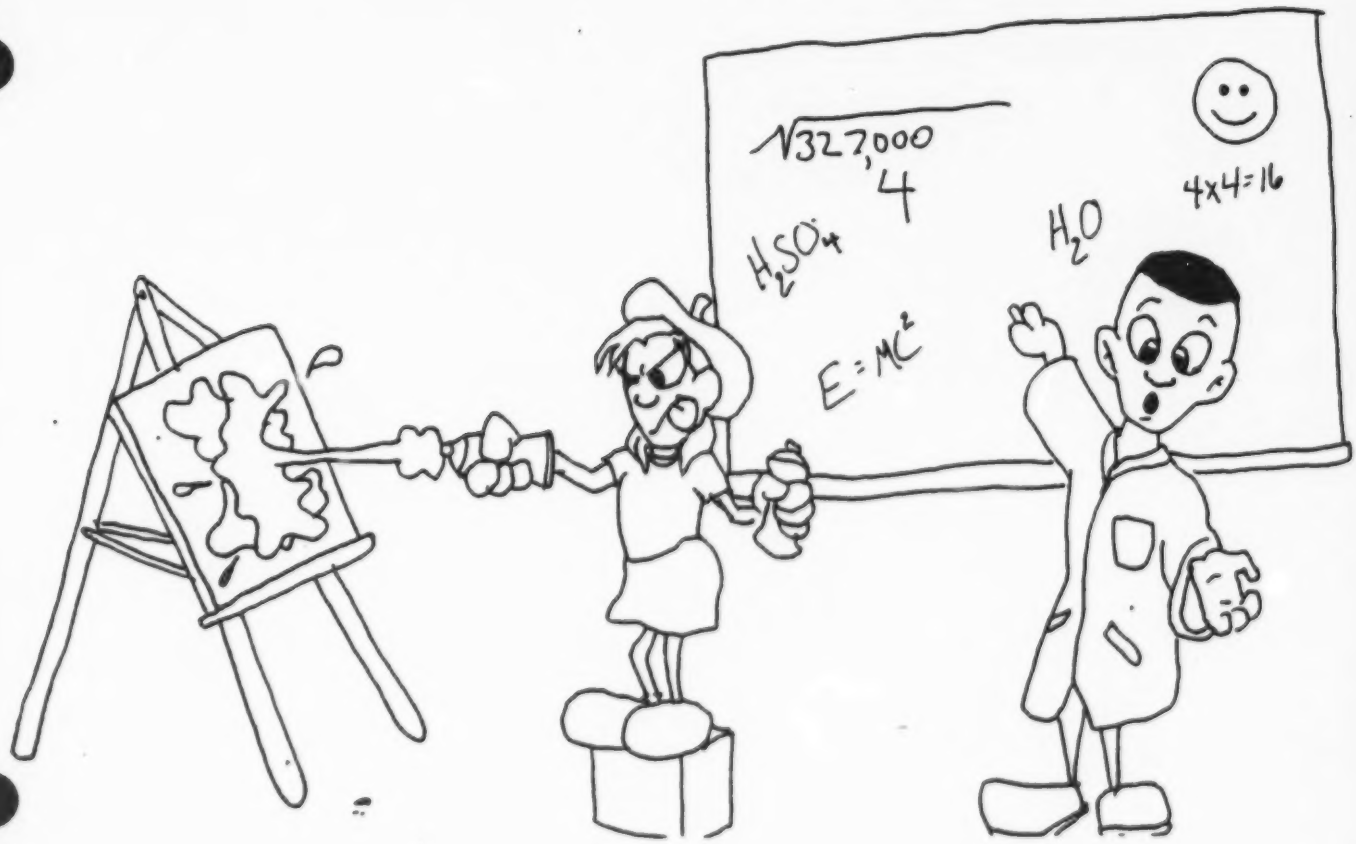
T-8



T-9

JACKSON B.
FOR
STUDENT
COUNCIL
PRESIDENT

STUDENTS AGAINST MYSTERY MEAT
NO MORE MYSTERY MEAT!
NO MORE

T-10

What might these students be like?

Large knowledge base
Good memory
Unusually varied or intense interests
Highly developed verbal skills
Ability to process information quickly and accurately
Flexibility in thinking, sees many points of view
Persistence
Ability to generate original ideas
Enjoyment of abstract ideas
Awareness of relationships among diverse ideas
Intense opinions or emotions
Sensitivity to feelings of self or others
Concern for global issues
Sense of humor

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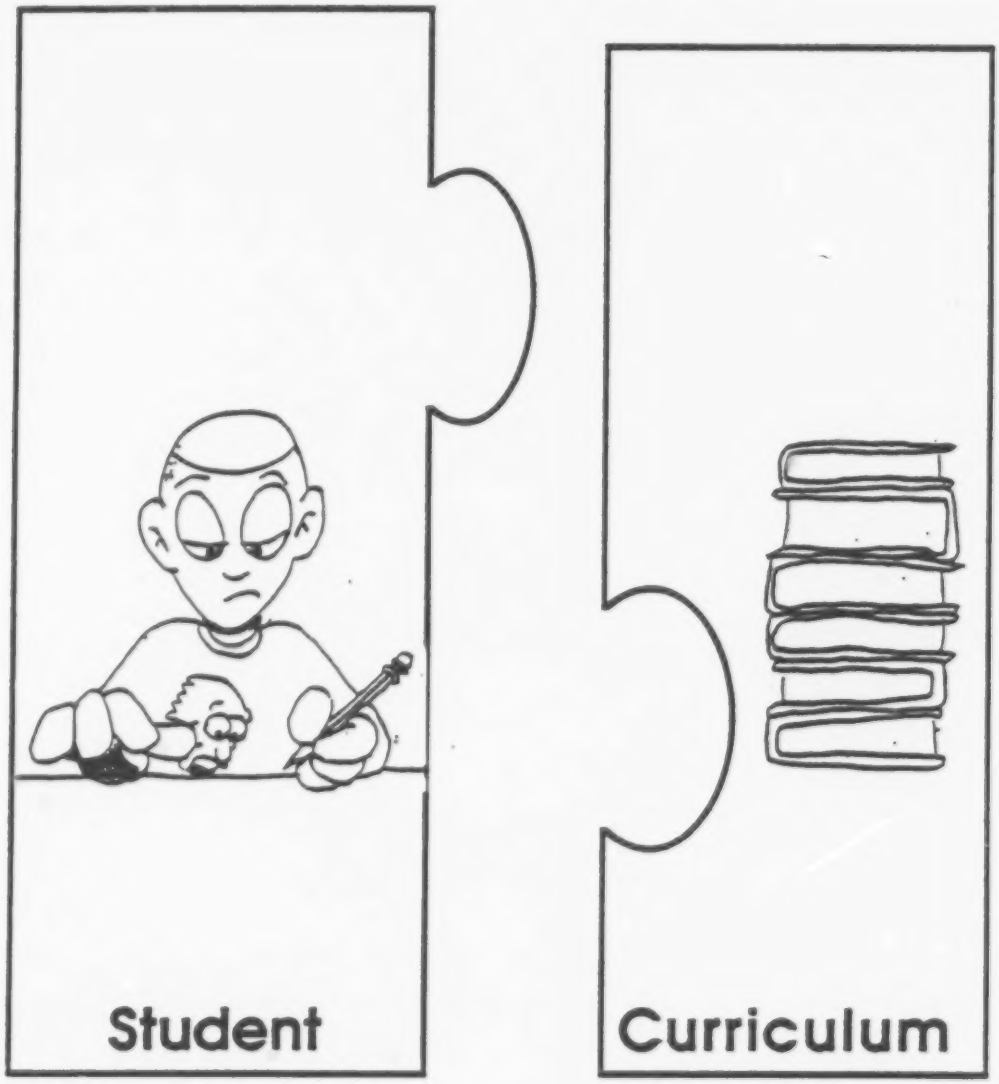
T-11



T-12

Gifted and talented students must be able to move at their own rate regardless of age or grade placement.

Gifted and talented students must be offered a diversity of learning experiences which includes instructional methodologies, activities, materials and experiences beyond the classroom.

Gifted and talented students need to be challenged and stimulated in an environment that allows children of like ability and interests to learn from and support one another.

Gifted and talented students require guidance so that they may understand themselves and make the best of their educational opportunities.

Michigan State Board of Education

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T-13

Administrative Structures

Self-contained classes

Single subject classes

Pull-out

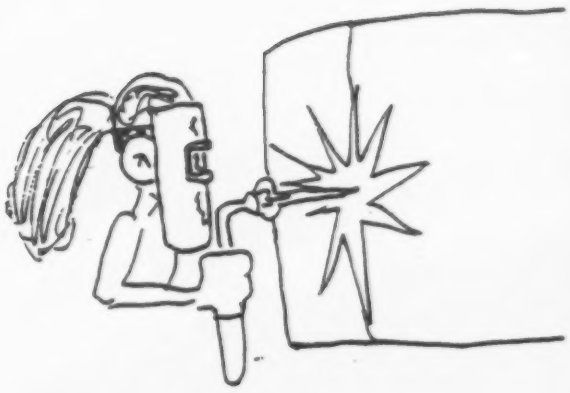
Acceleration

Cluster Groups

T-14

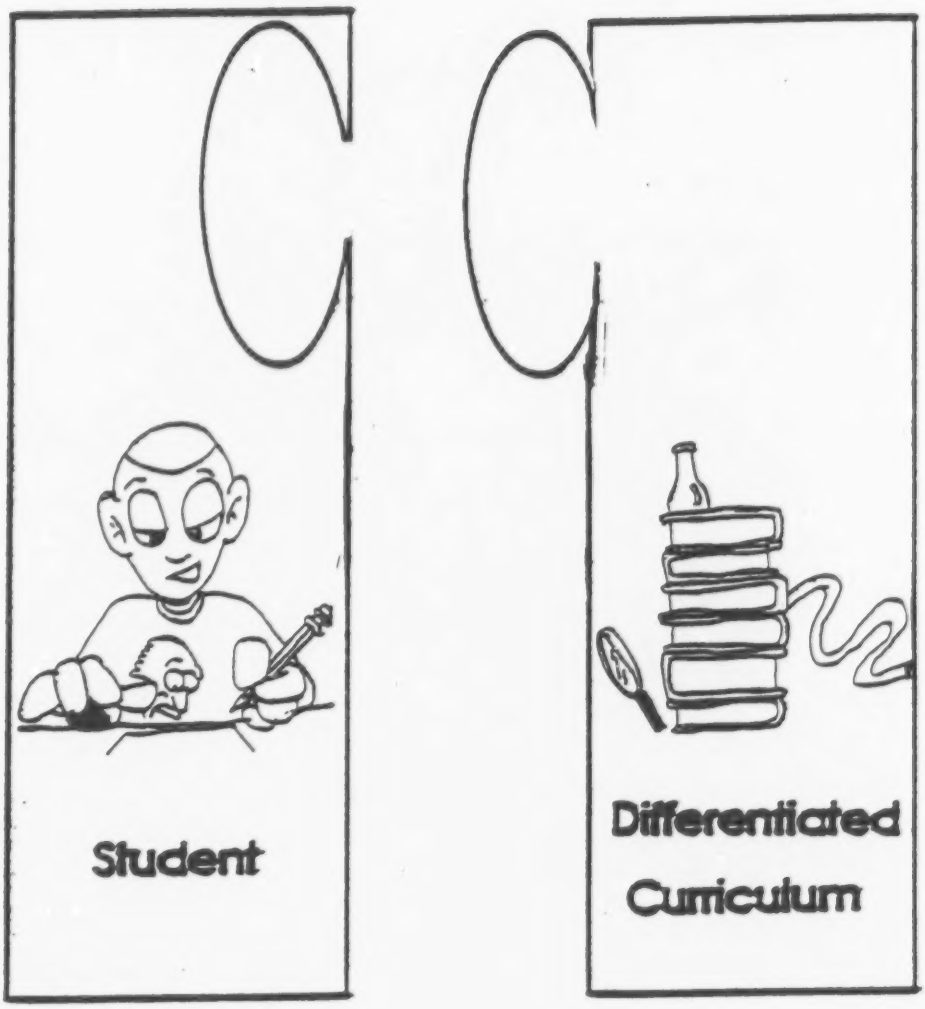
Identification:

Multiple Criteria



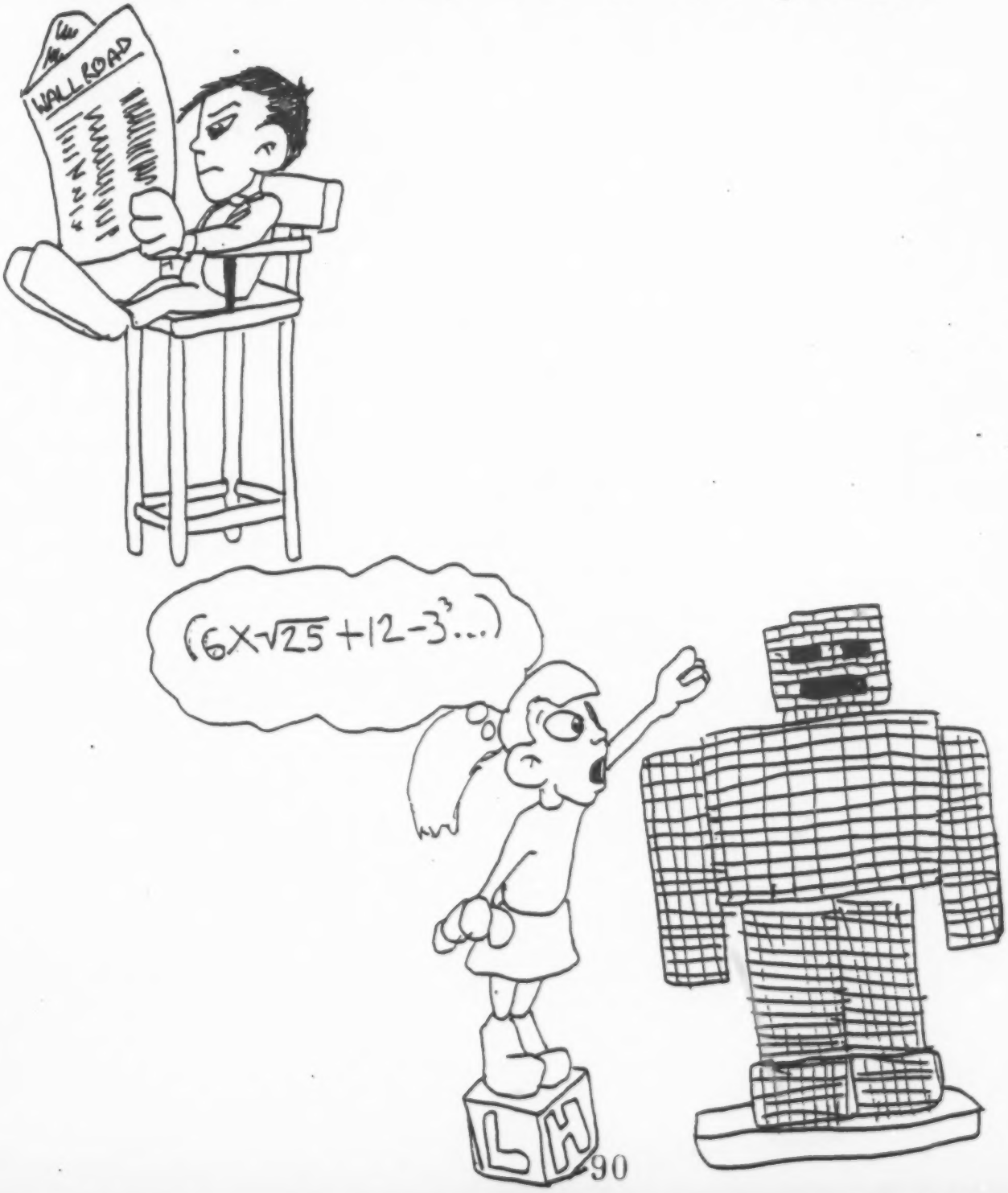
T-15

T-16



T-17

Where will they be in ten years?

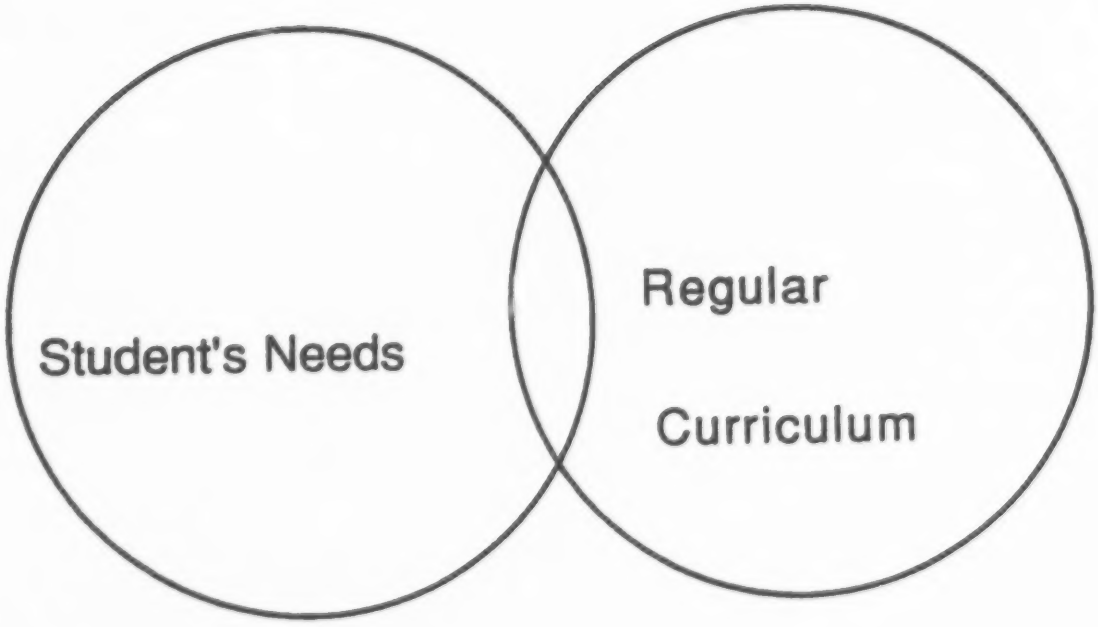


T-18

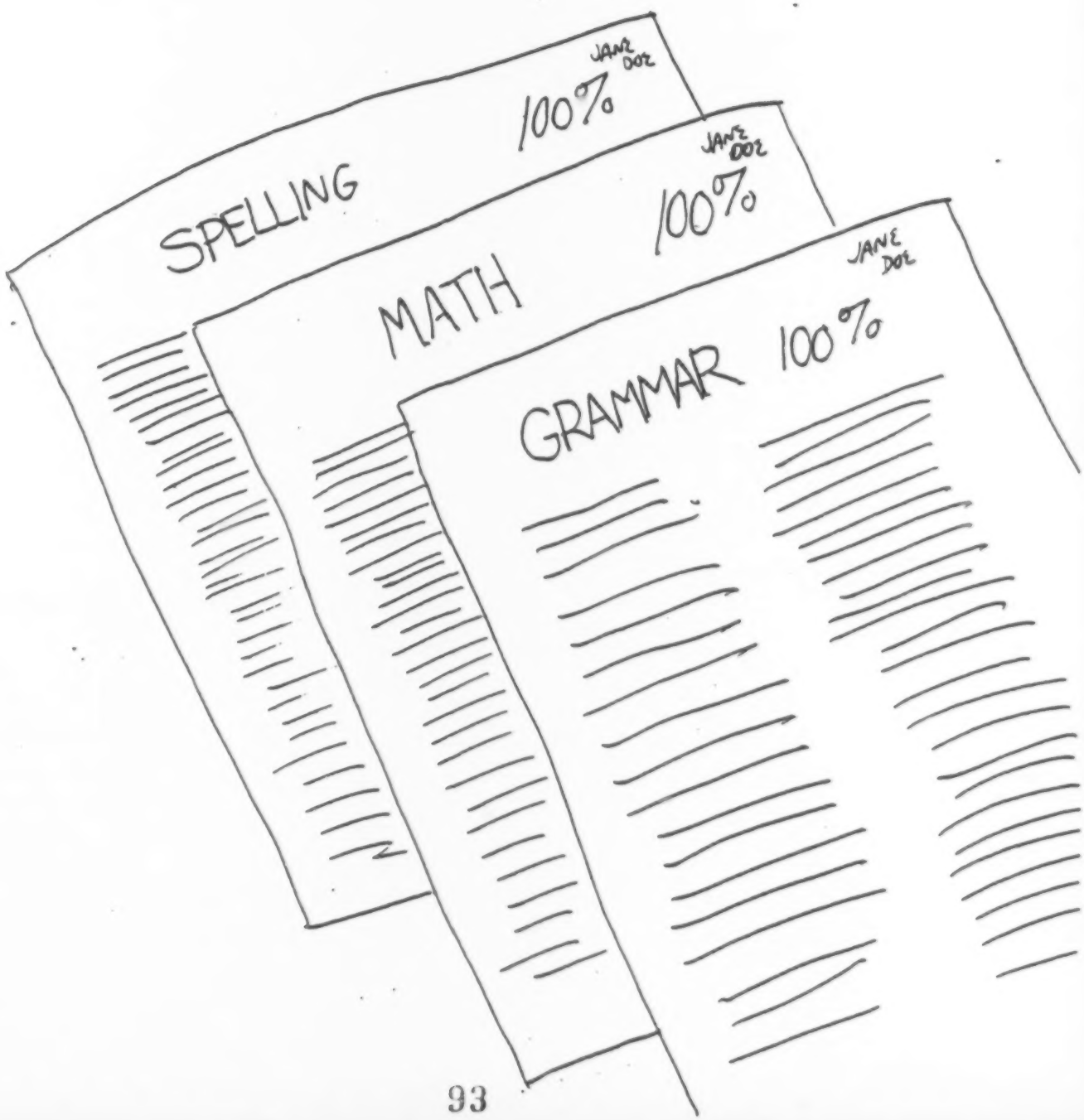
Diagnosis: How much of the regular curriculum does the student already know?

Differentiation: In what ways would the curriculum and/or activities be changed to meet student needs?

T-19



T-20



T-21

Science Contract

Chapter Ten: Keeping Safe

MY CONTRACT

GRADE 6 MATH

INDEPENDENT STUDY FORM

TOPICS that interest me are:

1. _____

2. _____

3. _____

Circle the one that you will be investigating for this study.

QUESTIONS I want to answer:

1. _____

_____

2. _____

_____

3. _____

_____

RESOURCES I will use: _____

_____

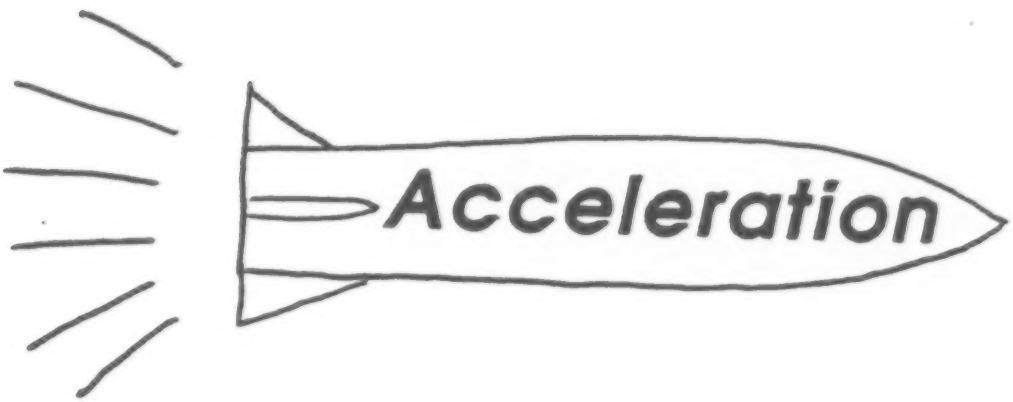
ACTIVITIES I will need to do: _____

_____

REPORTING METHODS possibilities: _____

T-22

Enrichment



T-23

Curriculum Differentiation:

Acceleration

Increased depth or breadth

Thematic or interdisciplinary study

Independent investigations and product development

T-24

Enrichment or acceleration options chosen should reflect student interests and strengths.

T-25

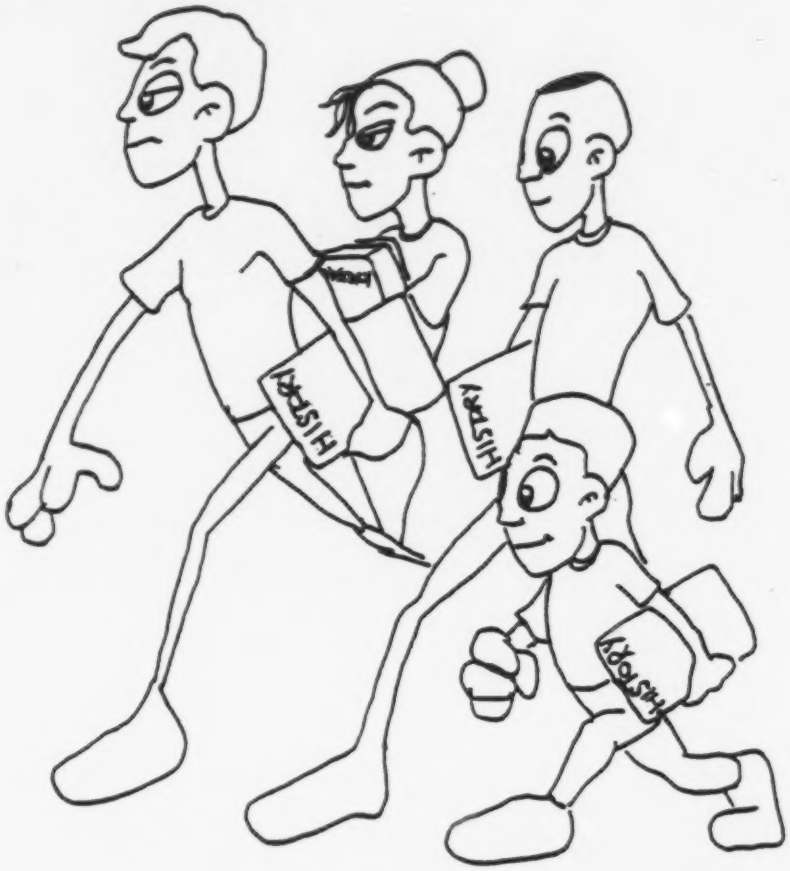
Students need to work hard in strength areas.

T-26

Students need the opportunity to be challenged in areas of interest.

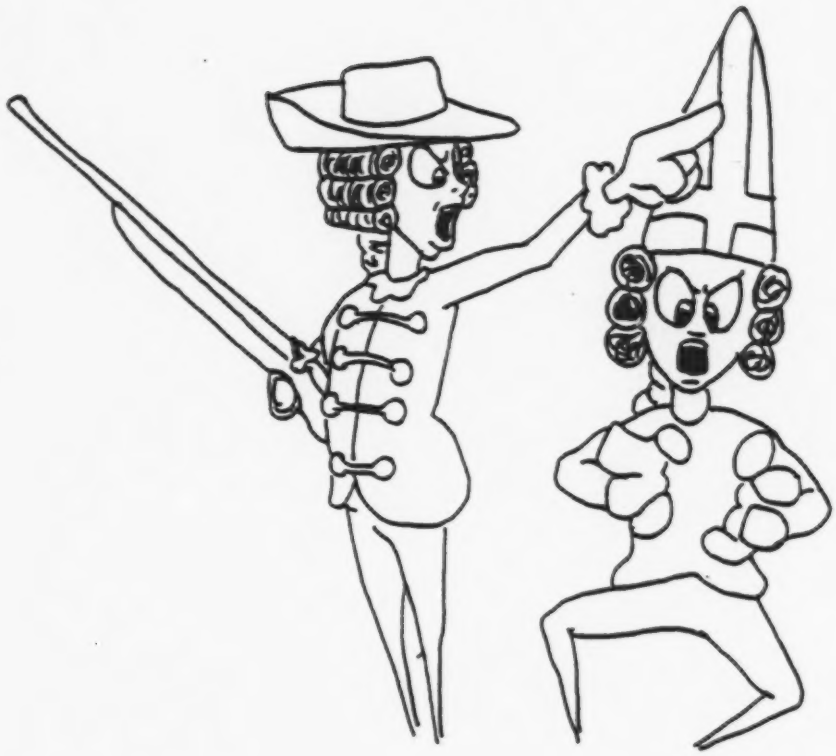
T-27

Acceleration



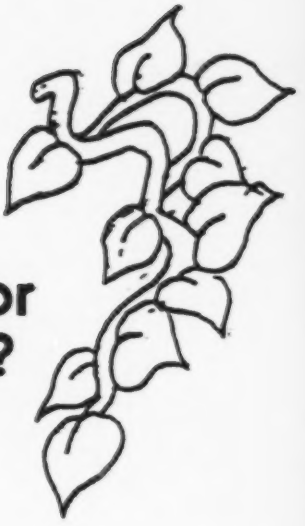
T-28

Increased depth or breadth



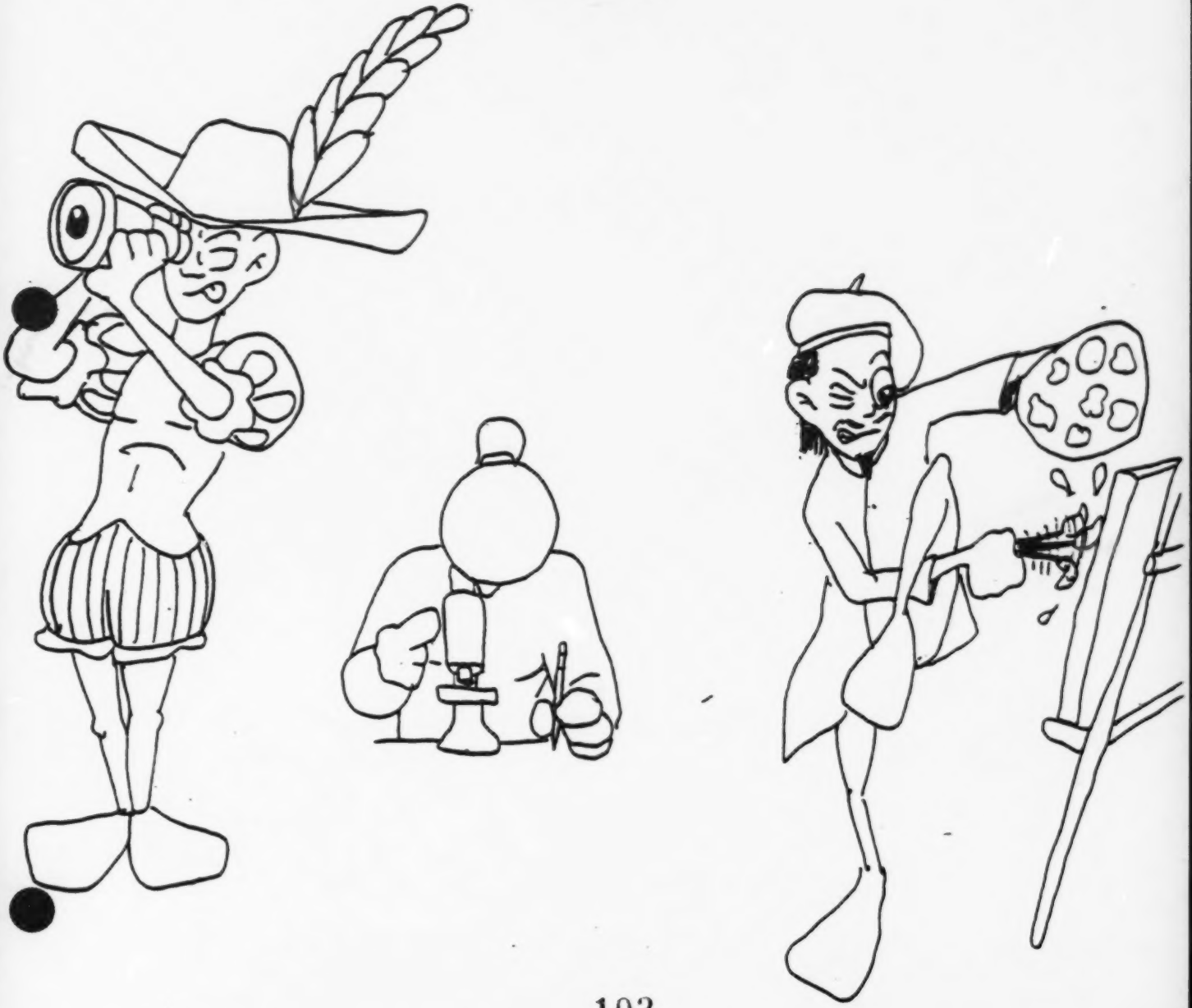
T-29

How might you add depth or breadth to a unit on plants?

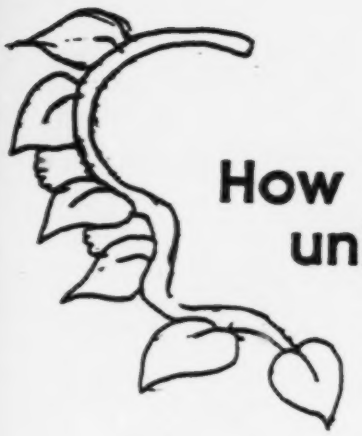


T-30

Thematic or Interdisciplinary Study



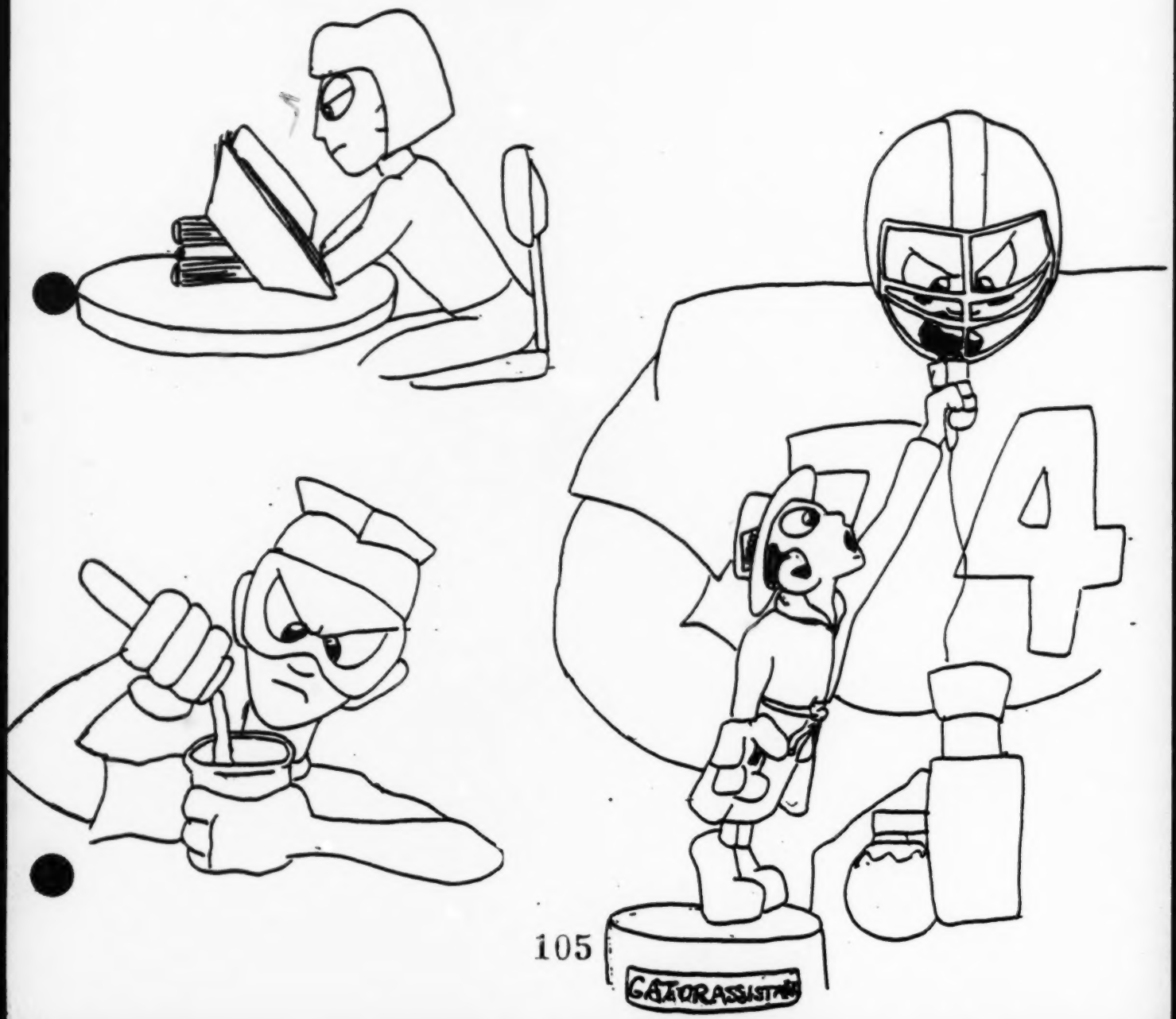
T-31



How might you transform a plant unit into a unit on growth or change?

T-32

Independent Investigations



T-33

How might students conduct independent investigations on plants?

T-34

Mentors

T-35

Affective Needs

T-36

Variation in levels of physical, emotional, and intellectual development

T-37

Many kinds of peers

T-38

Sensitivity to verbal and nonverbal cues

T-39

Perfectionism

T-40